

'Software firms are failing users'

by John Kavanagh
SOFTWARE firms are more concerned with short-term profit than customers' long-term needs. And users are being denied the benefits of new technologies and methods. That claim made by Cincom president Tom Nies during a flying visit to the UK last week has sparked off quick replies from leading software firms mentioned by name in his damning indictment of the industry.

Nies, head of one of the world's biggest independent systems software suppliers, said short-term investment policies were "a scandal". Through the suppliers' self-interest users' demands for productivity tools were not being met. Too many suppliers still used Cobol, developed in 1959 and now a block to progress in software development, he said. He pointed to

a need for application languages such as Cincom's Mantis. Nies partly blamed IBM for failing to take a lead in software. New software technology from IBM would make other suppliers suffer, Nies said, but IBM lagged badly in software products.

He singled out applications specialist Management Science America and database firm Cullinane as firms which were buying other companies to improve their balance sheets.

But MSA's head of international operations, Michael Hunt, dismissed Nies' claims. "We put \$22.9 million into research and development last year," he said. "That was 22% of our revenue. One of our biggest operations is customer field support. This sort of investment is the only way to improve our profit and loss position. We're growing at over 40% a year. Cincom's growth is less than 30%."

"As for Cobol, it is the standard language for users. A new standard is more likely to come from IBM than from Cincom with Mantis."

Paul Ingram, managing director of Systems Resources, which sells the UFO rival to Mantis in the UK, agreed. "When companies like MSA started writing packages Cobol was one of the few standard languages," he said. "MSA packages have been maturing for years; that's why they're so good. If you're selling to IBM customers as MSA is, you write in Cobol or PLI because that gives you a broader market. But it doesn't really matter if the package is in Cobol as long as it does the job and integrates with IBM products."

"That is why UFO scores heavily, because it can be built into existing Cobol systems even though it's a fourth-generation language."

Cullinane's UK managing director, Vic Morris, said suppliers had to be closely in tune with users' needs to be successful.



NIES... Short-term investment policies "a scandal".

"Looking at application generators can be a somewhat shortsighted," he added. "What users want is products which can all integrate with each other."

IBM users left to the industry leader's side in the face of Nies' comments. "IBM software is getting a lot better," said user association officer George Gower. "In our latest software survey products are no longer below the league. You would expect it to get low marks because it is being at a very broad market."

Software Analysis; page 11.

of mathematics and computer science graduates, which will show the biggest increase - 48% - between 1978 and 1985, will fall back after 1984, says the report.

"The continuing decline in the numbers of engineering and technology graduates in 1985 may well coincide with a significant increase in demand by employers should the anticipated economic revival occur," says the report.

Richard Pearson, head of labour market studies at the institute, put it more bluntly: "I wouldn't be surprised if demand doubled very quickly. The market could go quite berserk. Given the need to support the new technologies we should be expanding not contracting our output of trained engineering and technology graduates."

The report comes after damning outbursts by industry leaders, including ICL managing director Robb Wilmut and Hewlett-Packard's UK managing director, David Baldwin, on the government's university spending policy.

And the Department of Industry says it "deplores" the report. "We want to see the development

No training, no growth

by John Kavanagh
CUTS in government support for university degrees in technology subjects could pose critical problems as soon as the economy starts to recover.

That is the conclusion of a damning report on the supply of graduates by the independent Institute of Manpower Studies. The report puts new pressure on a government already being berated by computer company heads for the fall in university places.

But other industry leaders have seized on the report to call for more training of computing staff by employers. The government's Manpower Services Commission and the Institute of Data Processing Management say installations have cut right back on training in the slump and are only interested in experienced people. When recovery comes there will be a serious shortage of trained staff, they say.

The Institute of Manpower Studies points to a 5% fall in the number of electrical and electronic engineering graduates who will leave UK universities between 1984 and 1985. Even the number

of robotics and information technology as widely as possible in industry," said a spokesman. "The future of our industry depends on it. If there is a shortage of young blood the long-term effect could be serious."

Demand for graduates is likely to be considerable. Last year ICL took on over 300 and it is "recruiting heavily" this year, although it wants people from any discipline.

But it is user installations and industry which should be doing much of the training of computing staff, according to the Institute of Data Processing Management.

"We don't need computer science graduates for commercial computing," said secretary-general Ted Cluff. "They would get bored after six months and leave. What we need are people at the bottom end. If employers do not take on trainees and there is an upturn there will not be enough people. Employers are now chasing people with at least two years' experience."

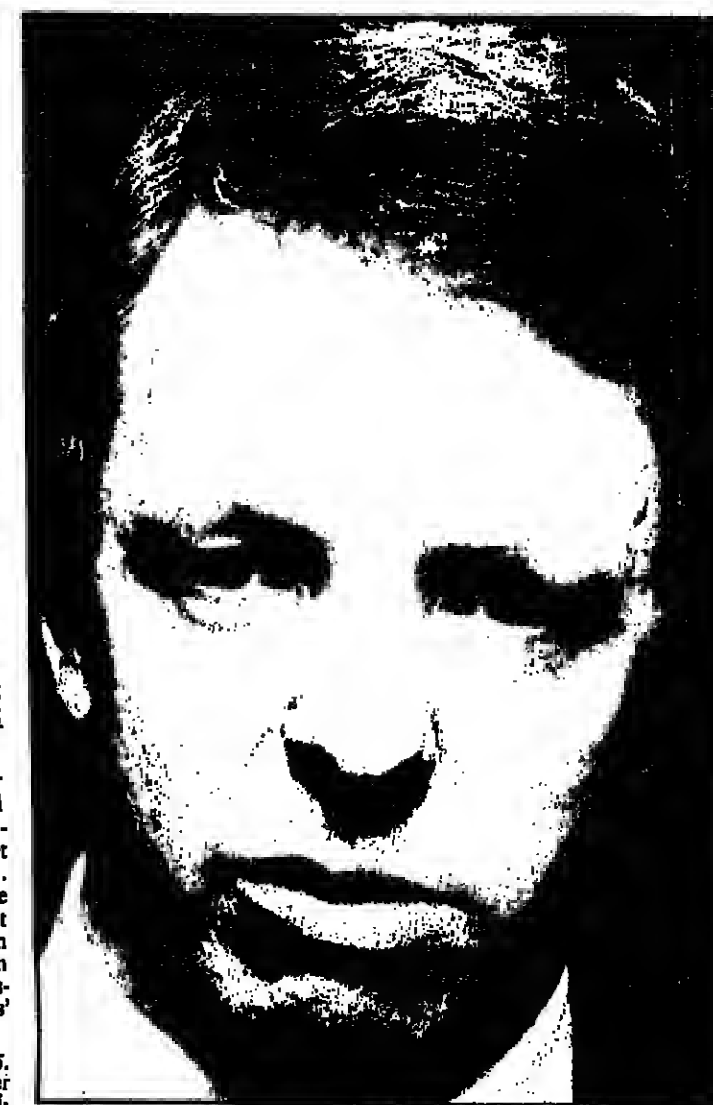
Graduate Supply: Projections to 1985. 29pp. £4. Institute of Manpower Studies, Manelli Building, Sussex University, Falmer, Brighton BN1 9RF.

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PEARSON... "The market would go berserk."

Sperry wins big US navy order

SPERRY Univac has won a \$324 million contract to supply computer systems to the US Navy Sea Systems Command - and it could lead to further orders worth over \$500 by 1988. The announcement comes two months after Sperry's \$476 million deal to equip the US Air Force, including 20,000 peripherals.

The mainframe maker is to double production capacity at the communications and terminals product division at Salt Lake City at a cost of \$43 million.

Cork boards

CALIFORNIAN chip maker Western Digital is to open a circuit board assembly and test plant in Cork, Ireland. The initial investment in this first Western Digital plant in Europe will be about \$2 million, and finished goods should be shipped out of Cork from September this year. Highly automated equipment will be used to assemble the family of disc controller boards.

Hong Kong stake

TELECOMMUNICATIONS group Cable and Wireless in which the government has a 49% stake, has bought a 34.8% share of the Hong Kong Telephone Company for £143 million. Cable and Wireless already has an 80% subsidiary company in Hong Kong which last year made over half its overall group profits.

10 more in store

LEADING US computer retailer Computerland plans to open 10 more stores in the UK this year in addition to the two in Southampton and London that began trading in November 1982. Computerland now has 440 stores in the world, 300 of them in the US.

DPMs unready for privacy Bill-survey

by John Riley
THE MAJORITY of DP managers in top computer companies do not understand the Data Protection Bill, and are not prepared for it.

But most of them think that the legislation is vital. Some 200 DP managers replied to a survey conducted by the Department of Computer Science at Brunel University. About 60% either had no knowledge of the subject, or just an acquaintance with it. About 50% had not read the various White Papers, or committee reports on data protection.

Jim Wood, lecturer in systems analysis at Brunel, commented: "There has been a lot of discussion about the Data Protection Bill, with most of the opinions being expressed by users. We decided to ask the people who would actually implement it."

Paradoxically, although 60% had little knowledge of data privacy, some 80% considered it urgent that the government introduces such legislation into the UK. The companies sampled were all

in the data processing industry, and revealed that their personal records were split between computerised and manual systems in 88% of the cases. Only 6% had their personal records fully automated. There was a strong feeling among DP managers (80%) that the legislation should include manual record keeping systems as well as automated systems, and 76% agreed that people should be able to check their own records. However, over half of those companies expecting to be affected by the legislation have not studied the possible impact on changes to software, installation of security systems, staff training, and so on.

Wood thinks that the cost of implementation will be high. "If the Bill is implemented correctly, I can see it costing a lot of money and creating a lot of extra work. A significant amount of work will be diverted in monitoring and controlling for the new legislation."

Survey of Opinions on Privacy in the Computing Industry, Hannah Chavda, Department of Computer Science, Brunel University, free of charge.



Top banks are linking terminals in two national networks.

Top banks plan control of the cashless society

by George Black
and Andrew Thomas
FIVE major banks are to make a push for the cashless society and take control of the proposed links of shop tills to banks. And top banks are to combine to link their cash terminals in two separate national networks.

A consortium of NatWest, Barclays, Lloyds, Midlands and Williams & Glyn's wants to wrest control of the project from credit societies and smaller finance houses, according to a report now circulating within the UK's top banks.

A spokesman for the Committee of London Clearing Bankers, which has to decide the issue this summer, said: "Retailers have been on at us to get the thing under way and they can't expect us to do it purely for everyone else's benefit. If the building societies are so keen to establish such a system, then let them do it - but they haven't made any move so far."

The five aim to do away with both cheques and the traditional pieces of plastic, eventually replacing them with microprocessor-based cards which handle all transactions. First step is the pro-

posed shop-to-computer link which could be launched in 1986. The ones to gain most, the report argues, will be the system's owners, who could get their investment back within three years through reduced operating costs.

Systems house Logica last month completed its study of the plan for online transaction checking. Now the CLCB is looking at how best to bring in electronic funds transfer at point of sale (EFTPOS). The proposed consortium would cut across several other computerisation developments which have been recently floated.

Phase one has been estimated by the report to cost about £37 million. And it could lead to more than 100,000 terminals in shops being linked to central computers by the mid-1990s.

Meanwhile five UK banks are planning a shared cash dispenser network to provide 2,500 through-the-wall terminals serving 15 million customers. The scheme, involving the Bank of Scotland, Barclays, Lloyds, the Royal Bank of Scotland and Williams & Glyn's, will involve a dedicated hardware network linking the banks' own mainframes.

DG takes aim at Wang

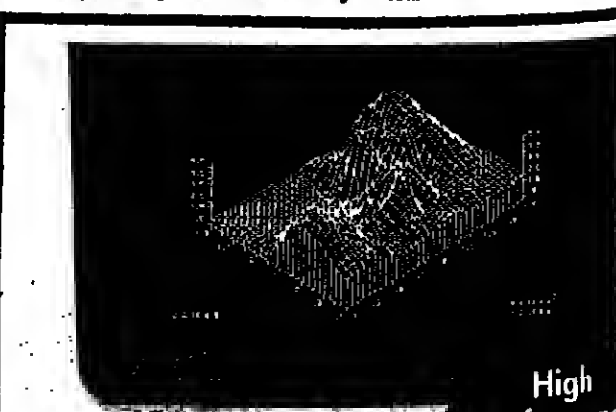
MINI manufacturer Data General hopes to snatch Wang users by a new twist to its office automation strategy.

A new software package announced by Data General last week enables Wang word processor users to plug into Data General's Comprehensive Electronic Office.

"This means that we can now go out and approach customers who have invested in Wang word processing," said Alex Monro, Data General's marketing communications manager. Compatibility is achieved by

software which translates the existing codes of documents produced on Wang word processor into format suitable for Data General Comprehensive Electronic Office available on its MV series of 32-bit minicomputers.

The initial licence for the document exchange package is £3,905, and subsequent fees for attaching other Wang equipment to other MVs in the network are likely to cost £1,000. This is the latest development in Data General's efforts to gain compatibility with other manufacturers.



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Systime chairman is axed

by John Kavanagh
A BOARDROOM battle at UK systems builder Systime has forced out long-serving chairman John Parkinson.

But Systime's executive director, including founder and managing director John Gow, denied it was a condition of the £8 million investment by US giant Control Data.

"It's our institutional shareholders who want this," Gow said. Parkinson helped build the company from a £1.2 million turnover to £44 million in eight years.

As one senior man put it: "Without him we would not be here today. He has done an absolutely wonderful job."

The shareholders wanted a new independent chairman with no personal stake in the firm.



PARKINSON... Axed

Parkinson has 8% of the shares. This will fall to 4% when the Control Data deal is finalised. There is no question of the directors walking out if Parkinson goes. They say they will accept what is best for the company. Parkinson is to set up as a business consultant.



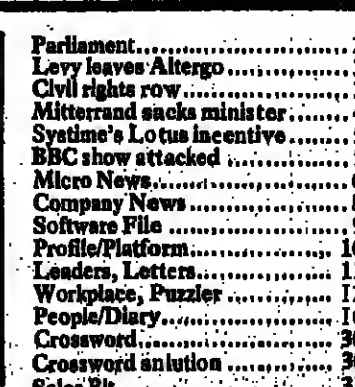
Randy Parker want Nat-Semi to fight



F International's Steve Shirley buys into US...



Alun-Jones Ferranti bounces back



Job Vacancies

Mitel delay is a blow to ICL

by Kevin Cahill
ICL's AMBITIOUS networking strategy has received a serious setback as telecommunications supplier Mitel announces a nine month delay on its key SX 2000 exchange.

The set back has occurred as at least one broker withholds a forecast for ICL's likely sales and profits in 1983, pending clarification of mainframe strategy.

The delays to the Mitel SX 2000 Private Branch Exchange, known as the DNX 2000 inside ICL, are due to delays in getting British Telecom approval.

George Smith, Mitel's marketing director in the UK says the company has had difficulty in defining the British telecommunications specification for 'maintainability' of the software which runs the SX 2000.

Smith said that Mitel did not have experience of the BT approval procedure, and had gone for a "fully featured piece of equipment."

BT approval now is unlikely "before December," and all customers are aware of the position, Smith said.

Smith categorically denied that Mitel was experiencing any difficulties with its CMOS based 8980 control chip. He was backed up by sources at ICL who said that the hardware development was, if anything, ahead of schedule.

ICL already has one Mitel PABX up and running at Letchworth for development work and a second machine is being installed at Feltham this week.

ICL has made the DRX 2000 the centrepiece of its ambitious networking strategy and the device is intended to handle all data and voice transmissions between users own sites and other external systems.

Brokers in the City, who have been keeping a close eye on ICL following the company's two recent cash calls for £130 million, are sanguine about the effects. Most

brokers had not built any of ICL's own projections for DNX sales into their forecasts and therefore do not have to make any adjustments to their own estimates of ICL's sales and profits.

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Mitterrand sacks his meddling man

by Jack Gee

FRENCH President Francois Mitterrand has signalled a switch to "hands off" treatment for the country's computer and electronics industry - half of which is now State-owned - by ousting Jean-Pierre Chevènement, Minister for Research and Industry, in a government reshuffle.

Chevènement, the most senior of only a handful of ministers dropped in what is essentially a game of musical chairs, has been under increasing criticism for interfering in the day-to-day management of the nationalised groups.

He has particularly antagonised Thomson-Brandt's chairman Alain Gomez and CII-Honeywell Bull's Jacques Stern. Chevènement drew fire from President Mitterrand himself at a recent Cabinet meeting for "meddling" and "bureaucratic behaviour".

When the new government, still headed by Prime Minister Pierre Mauroy, was announced in Paris it was revealed that Chevènement had asked to be relieved of his portfolio at the beginning of February after his methods were the target of Mitterrand's criticism.

Chevènement also ran foul of Telecommunications Minister Louis Mexandeau for trying to create a single State-controlled group to develop and manufacture electronic switching exchanges. Chevènement wanted to merge the

activities in this field of both Thomson and Compagnie Generale d'Electricite's subsidiary CIT-Alcatel and also introduce ITT's former subsidiary Compagnie Generale De Communications Telephoniques.

But, as Chevènement cleared out his office desk at the Ministry for Research and Industry, it was revealed in Paris that CGCT will continue to exist as a separate entity.

The new incumbent whose title has been reversed to become Minister for Industry and Research, is Laurent Fabius who until now has been Minister for the Budget.

Fabius said on his appointment: "The priority is to give confidence to businessmen and industry so that they can plan for the future."

Fabius, as ebullient and ambitious as his predecessor, has antagonised the French business community by persuading Mitterrand to introduce swinging taxes on industry and a wealth of tax which the minister originally designed to include factory equipment. This was later exempted.

Mitterrand has certainly given Fabius instructions to let the heads of the nationalised firms have a freer hand in running their businesses. At a lunch with the President a few weeks ago at the Elysee Palace the complaints about Chevènement's methods certainly prompted the plan to get rid of

him in the Cabinet reshuffle.

Commenting on Mitterrand's dissatisfaction with him at the time, Chevènement, who is head of the extreme left wing of the French Socialist Party, said: "A minister keeps his trap shut. Otherwise he leaves the government."

■ Plessey Microsystems is opening a sales office for France to expand its already well established business with French original equipment manufacturers (OEMs), marketing manager Norman Williams said in Paris.

Richard Bowles, the newly appointed sales manager France, will operate from an office in Tappes, a Paris industrial suburb "in order to put our money where our mouth is," Williams announced.

Williams said that Plessey Microsystems was confident that it could make a great success in the French market in competition against other makers of bubble memories and standard multibus systems.

He told *Computer Weekly*: "Our biggest market for semiconductor standard products today is the United States where we are beating the Americans on their own ground. In California people talk of 'doing a Plessey' as a synonym for being strongly competitive."

Williams said that Plessey's existing customers in France who have signed up over the past two years include both government



CHEVENEMENT... antagonised Mitterrand.

and private firms some of whom required equipment for "particularly rugged uses".

"This seems to confirm that Plessey has already succeeded in winning French Ministry of Defence contracts and suggests its customers could include Matra, Thomson-CSF and Electronique Marcel Dassault, which handle the major military electronics contracts."

Marketing manager Williams said: "We have a distinct advantage. Our experience in semiconductor is good enough to be of benefit to French firms. Nobody in the world can match us in bubble technology expertise."

"We can be of particular value in France to customers who need something other than a standard system."

Northern pupils catch the micro bus

by John Riley

THERE are no conductors with the latest microcomputer bus kitted out at Salford University.

The bus, the first of two, was handed over recently by Salford City Corporation, and will be used to provide microcomputer education to schools in the North-West.

Known as Mobile Education Centres, both buses will carry up to 15 microcomputers, a handful of academic staff and a range of software, to provide on-the-spot training, demonstrations and advice to schoolchildren and teachers.

The project is funded by Campus (the Campaign to Promote the University of Sal-

ford), an organisation set up in 1981 in the aftermath of the swinging cuts in Salford's grant. Campus has several hundred local member companies, which give grants to projects after weighing up their relevance from an industrial viewpoint.

Salford University takes an active role in promoting computer education within the region, and most of its activities are co-ordinated by its Centre for Computers in Education, headed by Dr Edward Plinn.

Salford has a contract to run the electrical and control technology centre for the North-West, as part of the Department of Education

funded Microelectronics Education Programme for Schools (MEPS). The director of the MEP North-West regional centre, Dr John Martin, is also a part-time lecturer in Salford University's physics department.

Another area co-ordinated by Plinn is a large number of short microcomputer courses for the general public. "These have been a great success," he said. "The CPM Pet course, for example, has had 600 people on it over the past two years." Salford also runs an NCC (National Computer Centre) funded industrial centre to advise local businessmen on choice of computers.

■ The Manpower Services Commission may introduce computers to its training workshops and community projects, said its chairman last week.

"Both offer an exciting opportunity to apply the power of information technology equipment to traditional craft skills," said David Young, MSC chairman. "Armed with a computer and knowing how to use it, a carpenter or metal worker can find whole new horizons and opportunities opening."

Young stressed the importance of information technology, and how he is taking steps to remedy the shortage of people with computer related skills.

Ethernet compatible repeaters come out

by Donald Kennett

UNGERMANN-BASS, the California-based network manufacturer, has developed what it claims are the first Ethernet-compatible repeater units to reach the market.

Two types are available. The \$2,500 local repeater unit is used to link one 500 metre length coaxial cable to another so that the maximum distance between stations on the network can be increased from 500 to 1,500 metres across up to three sections of cable.

Up to 100 lengths of cable can be connected to a trunk cable via local repeater units, allowing any station to reach any other across no more than three cables.

The other type is a remote repeater. These cost \$7,700 a pair and they are used, one at each end of an optical fibre cable up to 1,000 metres long, to link one of the coaxial cable sections to the trunk, further extending the maximum distance from one station to another to 2,500 metres.

The company launched its first products for Net/One at the end of 1980. It recently released support for IBM's Binary Synchronous Communications protocol as a free enhancement in its network operating software and plans to do the same for the SDLC protocol used in IBM's SNA.

ready and the first one should be in use by next month. The company hopes the exchange will be approved by the middle of the summer.

The customers include a hospital, an airline, a local authority and a government agency, and the exchange is claimed to be suitable for small businesses as well as organisations needing thousands of lines on several interconnected sites.

The exchange is designed to handle voice and data and is of the non-blocking type, which means that all extensions and exchange lines can be in use at the same time. Switching systems manager Dick Bradberry said: "This is one new digital PBX which is being delivered right on schedule."

SALES BRIEF

ICL picks up a healthy contract

ICL HAS picked up a £1.2 million contract to install equipment for recording administrative data for patients at the North Thames Regional Health Authority. There are also plans to install similar systems at North Bedfordshire, North Hertfordshire, Barnet, Brent and Victoria Health Authorities.

ITT switches East

US TELECOMS giant ITT has sold \$5 million worth of digital switching units (PABX) to Nippon Telegraph and Telephone (NTT). The 400 units will be delivered over the next two years and will make up 40% of NTT's private exchange equipment in its offices.

Micros for BT

BRITISH Telecom has bought four Plessey P40 microcomputers running the Unix operating system from Keen Computer for £150,000. Three of the computers will be for development of BT's System X digital exchange, and one for developing software to be run on central mainframes.

Lisbon graphics

UK GRAPHICS specialist Sigma Electronics Systems has bought microcomputer system with its own graphics T5884 terminal computer aided design at National Laboratory of Civil Engineering in Lisbon, Portugal. It follows Sigma's earlier Portuguese order for an image processor and satellite pictures.

Banks spend \$4m

PHILIPS Data Systems has picked up orders worth a total of \$4 million for PDS 6000 terminals from two Belgian banks. The ASLK savings bank has ordered 150 terminals computers with 12 workstations, and the Publieke has ordered 60 terminals and 10 workstations.

Box-office hits

SPACE Time Systems has lined up two more orders worth £300,000 for its theatre box-office management equipment to help government investment. The last Labour government had been quick to put money into micro development, after Jim Callaghan saw the Horizon programme on

BT likes Ferranti

FERRANTI has pulled off more orders from British Telecom for terminals, printers and controllers for the Isle of Man and the Channel Islands. The order coating scheme. The order specifies 30 P17 terminals, VDUs and 30 printers for local area networks at BT's London, South Western and Wales and Atlantic regions.

Store picks Sperry

SPERRY Univac has sold two of its 1100/61 mainframes for \$2.5 million to one of Canada's largest chain of retail chain stores, General Distributors of Winnipeg. The computers will use Sperry applications developer Magpac.

Money for gas

SHELL has given Serco Canada a £1.75 million contract for gas control equipment at two offshore gas complexes in the South China Sea. The system, called Snake, will enable remote control of operations and monitoring of equipment on the platform, and the acquisition and storage of online data.

MoD doubles

THE Ministry of Defence is more than double its spending on office automation systems from a US-based datapoint company Datapoint. £150,000 hardware and software will be installed in the MoD.

F International makes a US hit

by George Black
F INTERNATIONAL, the company which has built its reputation on women's programming skills, has taken over its American equivalent.

The Hertfordshire software house has bought Heights Information Technology (HIT), of White Plains, New York State, for an undisclosed amount. Connections between the two organisations go back to 1978, when F's then finance director Anne Russell met Argonaut Information Systems president Luanne James at the European Computing Services Association - they were the only two women there.

The association led to James selling HIT under a two-year licence from F International in November 1979.

F International decided to acquire HIT to strengthen its grip on the fast-expanding US software market. Company secretary Penny Tut said the company had learnt from its experience establishing

offices in Holland and Denmark that it was vital to have a local presence.

The UK based company now has 700 staff and 90% are women. Tut said it was the only company that advertised equal opportunities for men - but few men who were main wage-earners for a family were keen to join, as wages were not guaranteed.

"We recruit people with very high technical abilities, they must have had five years' experience and cannot have been out of work for more than two years," Tut said. Also they must be available for 25 hours' work a week including two or three days visiting clients. HIT had been set up on exactly the same basis, so there would be no problem integrating their activities.

Steve Shirley, the company chairman, who founded the organisation as Freelance Programmers 21 years ago and was awarded the OBE in 1980, is now in the US to set up the link and to look for a

local manager for HIT.

Burt Grad, who helped to found HIT and was president of the software section of ADAFSS, the trade association, in 1981/2, will stay on the HIT board. There is no current plan to change the name or structure of the American firm, which is thought to have some 70 people on its payroll.

F International, which has been expanding steadily in recent years, expects a turnover of around £6 million in 1983/4. Until two years ago it was headquartered at Chessham in Bucks, but has since moved to a country house at Berkhamstead.

Two major contracts won in the past couple of years were for the Iraqi State Engineering Industries to do a £100,000 feasibility study of distributed computing systems and a long-term survey for the British government's Central Computer and Telecommunications Agency.

It also has a number of multinational customers.

Horizon stars slam BBC's computer show

by Philip Hunter

THE two British participants in last week's BBC Horizon programme Better Mind the Computer have slammed the show for being sensational and for failing to explain the potential benefits of artificial intelligence.

Professor Igor Alexander of Brunel University who talked about an image processor that can distinguish between people's faces, said he thought the programme might make the government think again about investing the money recommended in the Alvey Report which is still under consideration. "It was Maggie I'd wonder if I'd want to release £350 million to people who want to make computers master of the race," he said.

Alexander pointed out that past BBC Horizon programmes had an important formative influence on government investment. The last Labour government had been quick to put money into micro development, after Jim Callaghan saw the Horizon programme on

The Challenge of the Chip.

The programme began with Professor Edward Fredkin, who has recently taken over as head of one of the world's largest artificial intelligence units at the Massachusetts Institute of Technology (MIT), spelling out his fear that computers would reduce humans to slaves in the 1990s.

Professor Donald Michie, who talked on the programme about artificial intelligence research at Edinburgh University said he had not seen the show, but thought there was not enough emphasis on the UK.

One important thing about AI, said Michie, is that it puts the user in the centre of the computing process. "AI has the potential to make man master of his own job," he said, and added that it was a shame the programme had failed to point this out.

Horizon producer Laurie John defended the programme and said: "I was anxious not to make any comment from myself, the commentary was very deadpan."

Ten go in OTL merger

by John Riley

TEN managers lose their jobs as a result of today's merger between word processor manufacturer Data Recall and office automation company OTL (Office Technology Limited).

"The idea has been evolving for about two years," said Spud Taylor, managing director of the enlarged OTL, and results from the areas of synergy between the two companies.

Data Recall loses its name, and as part of the deal its parent company, City banker Kettlewell Benson, gets 60-65,000 shares (about 3%) in OTL's holding company, ITL (Information Technology). The merger is being celebrated with a 10% price reduction on OTL products, which now include Data Recall's Diamond 7 word processor.

It is understood the job losses were divided roughly equally between the two companies. Bookham-based Data Recall has several hundred customers, mainly within medium sized organisations, for the Diamond, but lacked a support organisation and resources for future development.

OTL, of Winchester, has a small customer base, comprising some 20 large organisations, for its mixed voice and text office automation system Imp (Information Management, Processor). It does



TAYLOR... "A case of two plus two equals five or six."

however, benefit from shared resources with autonomous sister companies Computer Technology and Network Technology.

"Bringing together the two companies and their products really is a case of two plus two equals five or six," said Taylor, "as we now have a broad product range to take on the Wings and IBMs."

Taylor's short-term aim is to provide transfer files between the Imp and the Diamond, and in the longer term, by 1985, to have built a single family of workstations to serve both the medium and large markets. Taylor also sees OTL, CTL and NTL coming together.



SHIRLEY... Her company advertises equal opportunities - for men.

Sell for Systime and drive a Lotus

by John Kavanagh

UK SYSTEMS builder Systime is creating over 80 jobs in the next six months and offering its salesmen a month's use of a Lotus. It has started with the unusual step of spending around £18,000 on a national television advertising campaign to find 20-plus high-flying sales staff.

And by October the 1,400-strong company expects to have taken on a further 30 software people and 30 engineers.

This is believed to be the first time the national UK television network has been used to recruit staff. "There's a serious national shortage of good sales staff so we're trying something different to attract people," said personnel manager Steve Williams. The company is using Channel Four, plus national, local and trade papers.

Incentives for sales staff include a month's use of a Lotus Esprit car for the best performance each month and a year's use of a Rolls Royce for the year's best salesperson and sales manager.

LISTENING CHANGED THE WAY WE SEE OURSELVES.

As of April 1st, three of our divisions aren't divisions anymore.

Instead of Sperry Univac, Sperry Flight Systems and Sperry Division, now there's just Sperry.

For good reason. Originally each division served the different needs of different markets by drawing on different technologies.

But over the years, that changed. The needs of entirely different businesses started overlapping. And the lines between technologies began to blur.

Today we've found that our activities in computers, avionics, defence, and aerospace are really based on the same convergent technology: the electronic processing of information.

So Sperry's become, more than ever, one company.

We don't merely solve pieces of problems by automating isolated functions.

We use one incredibly fertile technology to devise integrated systems that solve every problem as a whole.

And we rely, for focus, on one unique approach: our ability to listen.

From now on, there's only one name to remember.

Sperry.



WE UNDERSTAND HOW IMPORTANT IT IS TO LISTEN.

Terminals shopping

THIS PACKAGE CONTAINS:

- Complete range of digital terminals
- All fully tested
- All delivered off the shelf
- 90 day on site warranty
- Supported by the terminals experts

Take a close look at the package.

Rapid terminals



Salford University's micro double-decker will provide an education.

Philips exchange goes on trial

by Donald Kennett

PHILIPS has passed the first hurdle in gaining technical approval for its TBX 3000 digital private telephone exchange by winning 10 orders from companies willing to set up trial sites.

The exchange was launched last September and the 10 orders total more than £1 million. Several exchanges have been delivered al-

ready and the first one should be in use by next month. The company hopes the exchange will be approved by the middle of the summer.

The customers include a hospital, an airline, a local authority and a government agency, and the exchange is claimed to be suitable for small businesses as well as organisations needing thousands of

lines on several interconnected sites.

The exchange is designed to handle voice and data and is of the non-blocking type, which means that all extensions and exchange lines can be in use at the same time. Switching systems manager Dick Bradberry said: "This is one new digital PBX which is being delivered right on schedule."

12345

Completely mobile manager who enjoys stirring things up

ROY TAYLOR claims to be completely portable. "I'm in the machine-independent manager," he says. "I like running companies wherever they do. Then I plan a macro and go into another industry." But now he thinks he has found the industry which is most interesting, so probably he won't be transported again. The in-house joke is that he liked the product so much, he bought the company. The company is Package Programmers Ltd.

"It's not absolutely true, though," he admits. "It's also said that I bought the company so I would get the people. Which is also only partly true. The fact is that I saw its potential when apparently no one else did and it was still very small."

He turned himself into a businessman after studying mechanical engineering at Imperial College, London, by postgraduate courses at the London School of Economics and the General Motors "Tech" in Michigan. His early career took him from business consultancy with PA to the managing directorship of Vytor Batteries.

When Vytor was sold to Hawker Siddeley in 1968 he left to become director of an animal feeds firm, Croftside, and Calthrop. After it was acquired by Dalgety, he picked himself up in another environment - with McLintock, Mann and Whitney-Murray, a computing consultancy owned by a firm of chartered accountants.

"It was here that I really learned about the computer business. This

was what led to my proposal in 1975 to take over PPL, which had just been established by Anthony del Tufo.

He dismissed with a contented chuckle an inquiry about how much he had paid for Package Programs.

"Well, let's just say that I got it cheap. Unfortunately del Tufo left as I arrived. He jumped too soon, which was a pity, as he would have been valuable to us."

The first product was a payroll system written in South Africa by the Gers-Warren Partnership, he recalled. This was Q-Pac, which had to carve out a territory from the market leader, Peterborough Software's Unipay. Where Unipay aimed at IBM users, Q-Pac aimed at the ICL field and succeeded.

"We did overlap into each other's area, but quite frankly our conversions in those days weren't that good."

He admitted that the conversion of Software International's general ledger package from IBM to ICL kit had gone "horrendously wrong", costing twice what the company had anticipated.

The programs were a mixture of Cobol and Assembler and it was going from IBM Assembler in Plan that caused much of the problem.

"Around this time I started to hear a bit about structured programming and I decided it was time to get rid of the artistry and introduce some science."

"I was sure that structuring was the only way forward."



TAYLOR... Got rid of the artistry and introduced science.

The dropping of Q-Pac arrested PPL's growth in the late seventies, but this was made up for by adding the agencies of Cyborg and Execucom products in the UK.

"If people leave PPL, they usually do so in the first six months, as soon as they know it's not for them. I prefer it that way."

In the last couple of years in

which Package Programs has been growing at the rate of some 50% per annum, Taylor has begun to fret about possible complacency.

"I'm a natural stirrer. If it starts to grow too big, I like to stir it up by splitting things into divisions and making them compete with one another. Yes, I do think that small is beautiful."

PLATFORM

We can show the world that we can lead

YOU'LL be delighted to learn that this is World Communications Year. You may be puzzled and wonder why you haven't heard more of it. British Telecom et al are just getting around to organising a committee on it.

Well it's this communications stuff you see - mustn't spread it around too much, mustn't waste it.

And speaking of waste how is BT doing these days? Does anyone really know?

First of all it needs lots of money, then it doesn't because it's "tightened up on suppliers", and this when it has overpaid suppliers by £160 million. (*Sunday Times Business News*, January 30)

I love to see people making profits, but monopoly profits are something else. A monopoly "profit" is the difference between how much they can get away with charging you and how much they can get away with wasting.

If you can't take your business elsewhere then there is no market, no competition, no price mechanism, no measure of anything.

Don't let anyone bamboozle you into muddy thinking. It's a simple matter of choice and you have only a binary one. Use them or don't.

This leaves you with the last choice - the market of misery (take it or leave it) - but it hardly gives you a dazzling shopping spree with endless opportunities.

So back to the pseudo profit we had to pay them. Last time BT "robbed" us (raising prices with impunity could be called disarming robbery) and made a huge profit. Then it played Robin Hood, taking money inequitably and re-distributing it equitably. If a politician bribed you someone might squawk, but if Buzby overcharges and then slips you a rebate you didn't earn, it's called "customer relations".

So now that the company has made another smash and grab it's going to pay people who don't use the phone for not using it!

Meanwhile it's trying to emascu-

late Mercury.

Once upon a time in a far off land there was a wicked witch called Ma Bell (Atrocious Terrible-Terminating) who found a naughty wiley child named Datan who ran a cheap alternative digital service. When Ma Bell's little goblin in Congress couldn't bend the legislation enough she dropped the tariff on that little Datan died. Then Ma Bell offered new digital services at sky high prices. She took pity on all the poor customers of Datan and took them in (didn't she just!). The moral of the story, says Ma Bell, is that nasty cowboy competitors can upset poor little confused customers. Of course we

can't do that.

And Alan Chamberlain, secretary of the union committee representing 240,000 BT workers, thinks there is an invidious new trend at work - payment by results. Only here the results are the number of redundancies achieved.

Two reasons for the increase, a Department of Industry spokesman told me. One, the government wants to bring the salaries in line with the private sector. Two, high salaries are needed for such a dirty job, with its attendant bad publicity.

10 YEARS AGO

FROM COMPUTER WEEKLY OF MARCH 29, 1973: With the minimum of publicity and fuss, the government communications network, known as Lora (London Outline Local Authorities) which linked the boroughs of Hackney, Haringey, Tower Hamlets and Hillingdon, was completed. . . A key-to-disk system, available with as few as four keystrokes at a rental of £370 a week was introduced by ICL. It was called the Key-Edit 50. . . Control Data acquired TTT Data Services for an undisclosed sum. . . Government aid to the computer industry for 1972/73 was estimated at £13.3 million.

Chad

I DON'T CARE IF THE FIFTH GENERATION COMES. AS LONG AS I CAN BE A CAT. NO MORE WORK A ROOF OVER MY HEAD AND ALL I CHOOSE TO EAT. REBORN

COMPUTERS DO TREAT US AS WE TREAT PETS.

Liveware File

Don

50

50

50

50

50

50

50

ComputerWeekly

Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS

Thursday, March 31, 1983

Heading for self made nightmare

THERE will be no shortage of people keen to draw a moral from the recent troubles at Altergo, the UK's leading IBM bespoke software house.

And no doubt there are as many lessons to be learned as there are pundits to teach them. But which ever way it is looked at, it is a sad business.

In the simplest terms, a significant and prosperous software company is encountering what would seem to be an avoidable problem. Raj Thomas, chairman of Altergo, took on a US financier as managing director in the hopes of gaining access to an infusion of funds. Three months later the financier, Leonard Levy, has returned to the beaches of California, and a number of Altergo employees have left for greener pastures. Thomas must be held responsible for a miscalculation.

But the problems at Altergo reflect a more general problem in what should be one of the UK's brightest hopes for industrial expansion. Software firms need money, lots of it and soon, but those who have the finance generally do not understand the problems of software development.

They are reluctant, as Levy apparently was, to leave the day-to-day running of the business to those who understand the game.

A tough, trouble-shooting approach may well have a role to play in any sort of firm, but software programs do not come off a production line like Smarties. Nor can analysts be motivated in the same way as factory workers. In short, very special skills are necessary to conduct a software operation successfully, and they may not be the same as those held by the average entrepreneur, commercial expert or financier.

What has happened behind the scenes at Altergo has not yet been spelled out, but there is the suggestion that Levy was looking for short term, immediate results. Let us hope that Altergo does better for itself next time, and that others think carefully before choosing backers.

The Altergo case is yet another indication of why the UK financial markets must adapt if we are to compete in world markets.

NEIL WOODNICK

Wembley.

Pooling of experience

WHILE I am not in a position to confirm or otherwise the remarks made about the product TPM70 in your article on DEC software (CW, March 10), I would like to clarify a misconception about Systel that could be construed from the article.

Systel is not a re-marketed TPM70. It is true that many of the TPM70 team migrated to Systel, and Systel is their brainchild. However, they pooled their experience and expertise together with software specialists from other areas, to design a Vax TP system. After two years gestation, Systel was born. Instead of being a wolf, Systel has had strong guard-

dogs.

Systel complements VMS, and offers many features needed for rapid development of efficient Vax software.

TERRY WILKINSON

Systel Marketing Manager, Systel Ltd.

Leeds.

Readable language

THANK you for telling readers about our Poplog system (CW, March 9), but I would like to correct a few minor errors.

Although I don't like Lisp myself, I would not agree that it is unreadable. People who are familiar with it find it very readable. However, for programmers accustomed to more conventional languages it is certainly a lot less readable than POP-11.

Readers may have gained the impression that because Poplog does not include incremental compilers for Fortran and Pascal, programs written in these languages cannot be combined with programs using POP or Prolog. In fact our VMS implementation does allow programs in other languages to be linked in.

I would not claim that POP-11 runs faster than Lisp, only that the richer syntax of POP-11 allows program development to be speeded up because of the extra compile time checks. Some interpreted Lisp systems will run more slowly, since POP-11 is compiled, not interpreted, but compiled Lisp can be very fast, since run-time checks are omitted in many Lisp systems.

AARON SLOMAN

Reader in Philosophy and Artificial Intelligence

University of Sussex Brighton.

1984 and all that . . .

THIS week's example of the strange things people say about computers was sent in by Philip Dobson, of London, who wins £5. (The computer) keeps your livelihood locked up in its innards like a train stuck in a tunnel.

Daily Mirror

LETTERS

Flash of inspiration

WHILE we have noted with interest the controversy surrounding VDU glare and associated eyestrain, my company has been investigating another aspect of terminals which we feel is potentially far greater - the flashing cursor. Tests have shown that a flashing cursor will cause operators to enter data twice as fast as a non-flashing one. Furthermore if more than one flashing cursor is displayed on the screen the increase in key depressions is directly proportional to the number of cursors, although if more than five cursors are introduced it can become difficult for the operator to identify where they are on the screen.

We have concluded from numerous tests that a "stroboscopic aversion" effect is produced on the brain which in turn causes a subliminal reaction to "turn off" the flashing light by displaying a character on the screen.

Since subliminal advertising was banned in this country in the early 1950s due to its inherent dangers we would strongly recommend that a government committee is set up immediately in order to produce legislation for stopping this lethal form of brain damage.

NEIL WOODNICK

Wembley.

Computers in schools

I AM sure that the graduates of Lymington's Diploma in Computer Education classes are first-rate computer education teachers. They are needed in the teaching force.

But do not equate computer education with computers in education. MEP is concerned with ensuring that all teachers have an understanding of how the computer can be used across the curriculum generally, and in their specialised subjects particularly.

From the experience we have I know of no authority that expects the teaching of computer studies as

a result of the basic awareness courses that are a condition of the government's in-service training scheme. They do expect teachers to begin to appreciate the kind of aid that the computer as a resource might offer in the classroom.

MEP's work in computer studies is to deepen the knowledge of existing teachers of the subject and not to provide central courses.

R. FOTHERGILL

Director

Microelectronics Education Programme

Newcastle-upon-Tyne.

Power of prayer

IT is all very well for Chad to pour his contempt on an old Aunt Sally like ICL, but I felt he was stepping into deep water (CW, March 10) with his piece "The Power of Prayer". He is obviously not into the spiritual renewal that has been taking place over the last decade.

I believe this phenomenon has been encouraged in no small way by the computer industry. Unlike the 19th century scientific discoveries which were an undoubted discouragement to faith, the 20th century emergence of computers has given new credibility to the concepts of an infinite God.

After reading Louis Robinson's article in the previous week's CW, can it be doubted that God does know the number of hairs on my head and the moment when each sparrow falls to the ground (Luke 12: v. 6.7.8)?

I am not suggesting that God is a computer, but I think computer journalists of all people should be circumspect in their disdain for a God concerned with the minutiae of our lives.

J. B. L. UPTON

Derby.

Tail-piece

YOU have scraped the barrel completely dry in your search for quotations to provide a humorous tail-piece to your editorial (1984) and All That, CW, March 10. Apart from the fact that it does not seem particularly funny, it appears in the week following the release of a car which has a talking computer to remind the driver that he/she is running out of petrol.

You may not think that the "voice of the Maestro" is bright or metallic but surely you allow your journalist colleagues some measure of poetic licence?

EUAN ROBERTSON

Great Missenden, Bucks.

Computers in schools

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R. FOTHERGILL

Director

Microelectronics Education Programme

Newcastle-upon-Tyne.

Patent infringement suit

YOUR article Landmark Piracy Lawsuit to Go Ahead in US (CW, January 6) apparently resulted from a Press conference on December 15, 1982 by The European Software Company, a subsidiary of Boole & Babbage, Inc. in which I gave a two hour presentation on a new product line being introduced into Europe by Boole & Babbage through The European Software Company.

Your article ignored the significance of the new product line and chose instead to emphasise the patent infringement lawsuit between Boole & Babbage and Candle Corp that was mentioned in the brief question and answer session which followed the Press conference.

I wish to correct certain inaccuracies contained in the article.

First, in the lawsuit against Candle Corp, Boole & Babbage has alleged that Candle has infringed Boole & Babbage's patented data extraction technique by using it in software marketed by Candle.

While Boole & Babbage believes that Candle's products do infringe the patent and that this is a very serious matter, Boole & Babbage has no reason to believe that Candle "pirated" or "stole" any Boole

Boole & Babbage

Sunnyvale

California.

President

COMPEC

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To: The Advertisement Manager, ComputerWeekly, Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS. (inserted in exhibiting at Compec Scotland 83. Please contact me

University of Sussex Brighton.

High-tech centre with antique feel

HIGH Technology, tradition and natural lighting are the three selling points of a new £10 million conference centre being developed from an old country mansion and mellow tree-lined meadows close to Heathrow airport.

The centre, called Anuraha, will open January 1983 to give conference organisers a refreshing alternative to the dreary hotel venues.

"We are trying to establish a little mystique," says Anuraha marketing manager Osanna Jones. The beauty of Anuraha is, according to Jones, that traditional style and comfort, will be ranged alongside the highest technology like video conferencing, satellite television and an infrared wire free audio network for conference delegates to talk back to speakers.

Anuraha began as a country house built in the mid-1800s although incorporating many old features including Elizabethan fireplaces, oak panes and wood carvings. The building was gutted, with many features being temporarily removed, and a huge domed conference hall is being built in the middle. Many of the original fea-

tures will later be put back in the building, a vast improvement on the two imitations of antiquity that bedevil us today.

This domed hall can be divided into two levels by a rising floor, creating space for 500 delegates upstairs with the lower hall below the floor free for meeting rooms, an exhibition, or a banquet.

The periphery of the building is being converted into 110 fairly spartan single or double bedrooms which can accommodate up to 200 people.

The computer chosen to calculate delegate's bills and handle reservations also has a ring of antiquity about it, the timeless Digital Equipment PDP-11. But the peripherals are more novel.

Each delegate is issued a plastic card with his name, company and number, which he uses as a key to various facilities including telephone, and film shows.

More important, the card is used by delegates to attract the attention of speakers through an infrared talk-back system. Delegates insert the card into a handset, fixed like opera glasses on to

the seat in front of them. This alerts the speaker, who is free to choose whether to let the delegate speak.

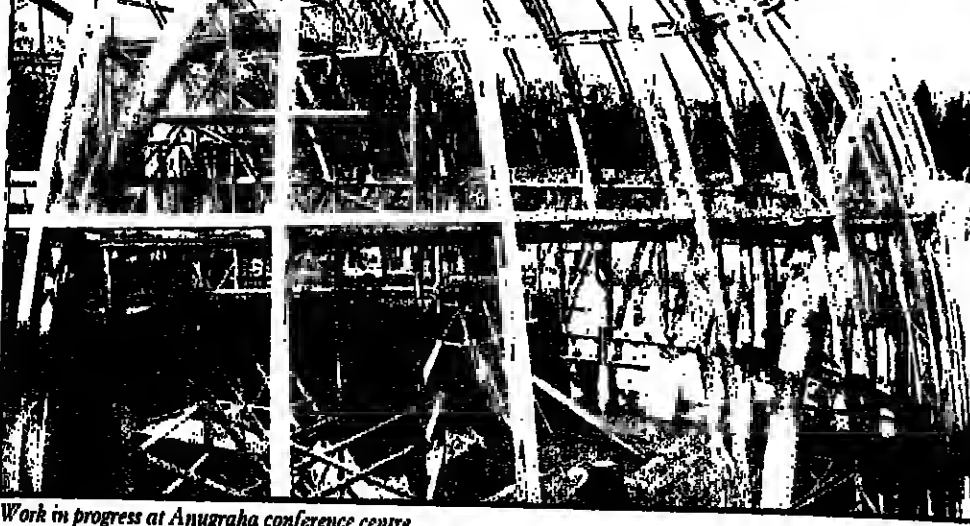
If the go-ahead is given, the delegate is given the command to speak on the infrared handset, and the details contained on the plastic card are displayed on a television monitor at the front of the hall.

Assuming that this system works, delegates will be spared the normal tedium of waiting first to attract a speaker's attention, and then for a microphone to be wheeled round to them.

Bookings have already been taken for the 1984 conference season, and a US travel agent has expressed interest in teleconferencing. Anuraha is also organising SIBs, Special Interest Breaks for weekends, including golf, flower arranging and computers.

Modern points are liberally scattered round the building so that conferences can be linked to computers other than the PDP-11.

Most conference delegates seem either to jog, play squash or swim these days. Of this Anuraha is well aware, and the jogging facili-



Work in progress at Anuraha conference centre.

ties in particular are double cream with Windsor Great park beckoning close by. There is also an indoor sports hall.

With all this, what has Jones to say about the prices that have been fixed for all of 1984? "We are pitching into the middle of the market," Jones comments.

Daily rates range from £9.50 to

£29, inclusive of food, room hire and VAT. The 24-hour rate with full board ranges from £56 to £105. The higher prices, which I would say entered the top of the market, apply to smaller groups, cordon bleu menus and single bedrooms.

It might be thought that delegates will be able to strip off and

sunbathe as they listen to speakers drone on under the big dome. It's such luck, since the dome is built with lexan polycarbonate, which has on the best authority will cut out the sunburning ultra-violet radiation.

Anuraha, I am told, is a Sanskrit word meaning "an unexpected gift".



Winning Orange boys Harvey Bell (left) and Paul Phillips (right) flanking team captain Michael Schuster and Enfield Mayor.

Victory for Orange Hill

ORANGE Hill School romped home to win the schools' computing quiz organised by the North London branch of the British Computer Society by a crushing 39 points to 26. The three boys of Orange must now be facing their chances in the nationwide BCS quiz to be held in Liverpool this July involving winners of the branch competitions.

Each of the three members of the teams were asked one question from each of eight sections including syntax of the Basic language, logic diagrams and the brief

history of the industry.

One of the competition sponsors was Control Data, which generously handed one of its Plato computer-based training systems to each of the finalists. The other sponsors put up the prize money of £250 to Orange, and £100 to runner-up Barnet School between them.

The competition is part of the BCS Silver Jubilee celebrations and leads to a nationwide quiz sponsored by Computer Technology. But first there are two rounds of regional eliminators.

All washed up in Donegal

UNEMPLOYED computer technician Wayne Dickinson last week stumbled into Ireland after being feared lost at sea - and thanked God. The indomitable 39-year-old had been 142 days crossing the Atlantic, surviving on his home-made grain mixture and unquenchable Christian faith.

His boat was hurled onto the rocks of Aranmore Island off County Donegal leaving him to climb a 350 foot cliff to safety.

"During the hours it took him to scale the cliff he paused to say: 'God please if you want to kill me, kill me, but please don't hurt my feet'."

Dickinson, who's from Florida, said he had undertaken the voyage to prove to himself that God existed. He had also promised to give up smoking if he landed at Falmouth. But he did not, so he shouted: "God, I've missed Falmouth. Why in the hell are you doing this to me?"

The crossing was made in a nine-foot boat called God's Tear, of which no trace was left after a pounding by storm force winds reaching Force 10 on the Beaufort scale.

He had lost all three of his radios in January, bringing him the solitude he had secretly wanted. "Why did Moses go into the desert?" Dickinson asked rhetorically.

Trifocal solution to bleary-eyed blues

A LONG session at the VDU leaves even the hawk-eyed a little bleary. For the middle-aged and long-sighted, the experience can be quite a headache. Many VDU operators with a few defects have found that normal glasses do not seem to solve the problem.

The reason is that the VDU is normally at arm's length from the user, while standard bifocal glasses focus only on objects closer than arm's length, or long distance. What is needed is a separate lens that focuses on objects between two and four feet away.

One answer is the trifocal lens. The bifocal lens has two parts, one for close work like reading, the other for distance vision. The trifocal lens is divided into three parts - one for reading, one for distance, and then the third part in the middle of the lens just for the VDU.

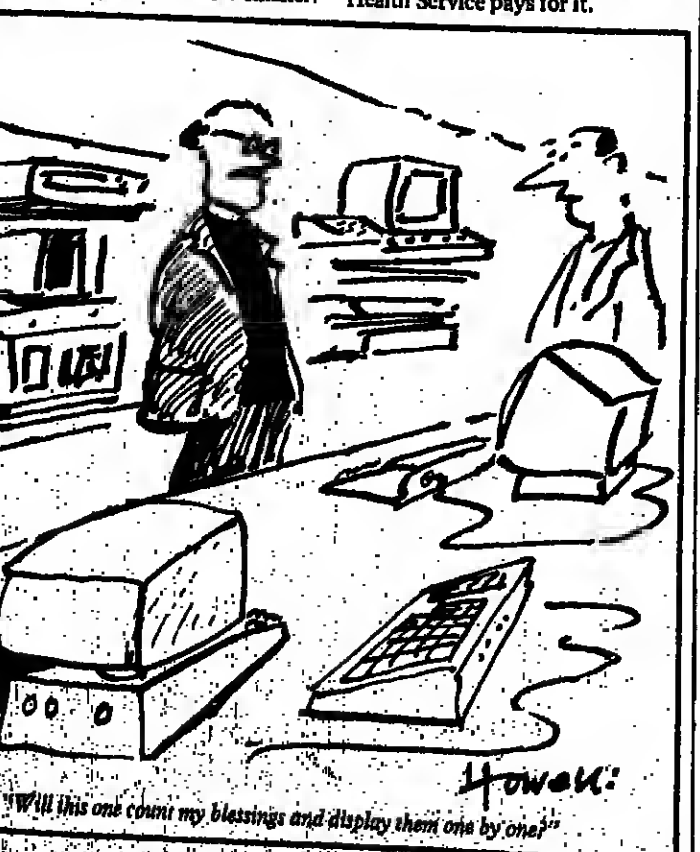
The trouble with the trifocal is that because there are three parts, each part is limited in size. The field of vision is therefore smaller.

And a broader than average field of vision is needed for operating some of the large VDU displays available.

A variety of trifocal lenses are now available, so it is possible to have one designed that is suited to VDU users - perhaps having a large middle part for the wide-angle or arm's length vision needed.

But the trifocal is not for everyone and some people will prefer a bifocal combining close and arm's length vision for VDU work, the close vision being needed for looking at the keyboard and reading print outs. A separate pair of glasses could be used for long distance.

Information on the possibilities can be had from the Optical Information Council (OIC) in London, or from the local optician. Anyone suffering from visual problems from use of VDUs, or indeed for any other reason, should have a full eye examination, making sure that the National Health Service pays for it.



"Will this one count my blessings and display them one by one?"

Cambridge firm launches UK version of Lisp

LISP is an anarchic language. While the trend has been toward making languages portable between programmers and machines, and easier to read, Lisp is neither. There are many different dialects of it, and the code is compact, but quite unreadable unless you know it.

Nevertheless it is the most popular language in the US for building artificial intelligence applications, but this is not surprising because it was designed for them. But in the UK it has not taken off.

Graphical Software of Cambridge has just released a version of the language called Great Lisp, a dialect close to the standard Lisp originally developed at Utah University.

Graphical has taken an interpreter for Lisp designed at Essex University and adapted it to run under its own Great operating system.

This makes it available to machines using CP/M-86 and MS-DOS operating systems, including the IBM Personal computer, the ACT Sirius 1 and Future Technology Systems series 88.

PUZZLER

THE problem here is to place one digit in each of these circles, so as to form a cyclic Prime number. This is also cyclic in reverse. In other words, you have to make up a five digit series which generates a Prime no matter which digit is chosen as the first one of a round-the-circle sequence, and also no matter which way round the circle the number is "read". See page 31 for the only possible set of digits.

GRAPHICS
MARKETING
PORTABILITY
APPLICATIONS
LANGUAGES
PRODUCTIVITY
VENTURE CAPITAL
OPERATING SYSTEMS
PERSONAL COMPUTERS

Programme

08.30 - 09.00 Registration/Coffee	12.30 - 13.30 Buffet Lunch
09.00 - 09.30 Overview - Key Issues for the Independent Software Vendor Paul Bailey	13.30 - 14.30 Languages Survey Michael Lehman
* How to Maintain Portability	* C Basic Family - Professional Business Basic
* Avoiding Software Obsolescence	* Pascal MT +
* Minimising Development Costs	* 'C'
09.30 - 10.00 The Changing Structure of the Personal Computer Howard Kornstein	14.30 - 15.00 Break - Coffee
* Developments in Silicon, Display and Media Technology	15.00 - 16.00 Productivity Tools/ISV Programs Chris Lusby Taylor
* Graphics in the Personal Computer	* Display Manager
* The Evolving User Interface	* Access Manager
10.00 - 10.30 Coffee	* Digital Research's ISV Support
10.30 - 12.00 Operating Systems Technology Tom Rolander	16.00 - 17.00 Graphics Interface for Applications Software Fred Langhorel
* Issues in Portability	* Machine Independent Graphics
* Survey of Operating Systems for the PC	* GSS Kornet
* Designing for CPM Compatibility	* GSS Plot
* CPM Plus - High Function/Performance CPM	17.00 - 17.45 Venture Capital and Software Marketing Tony Dimont, Howard Kornstein
* Concurrent CPM - Opportunities in Concurrent, Real Time PC Software	* Venture Capital for Software
* CPM 68K - Bridge from Univ Development	* Software Marketing and Presentation
12.00 - 12.30 Languages for Applications Software David Powys-Lybbe	18.00 - 19.00 Cocktails and Hors d'Oeuvres
* Issues in Language Choice	

Digital Research Independent Software Vendor Forum

Digital Research, the creators of CP/M, are sponsoring a major Software Forum at which World software authorities will discuss the key issues facing the Independent Software Vendor. If you create software for resale - or are considering doing so - you must not miss the Digital Research Independent Software Vendor Forum. Internationally known software professionals will explain how to broaden your market and increase your sales by exploiting the personal computer revolution.

All of the key issues - machine independence, the latest operating system developments - concurrency - transportable graphics - productivity tools - the marketing and presentation of software products - raising venture capital - will all be covered by experts.

The Forum will be held at the Café Royal on 21st April 1983. If you are in, or considering the business of marketing software for professional personal computers, then this is a day you should not miss.

Digital Research Independent Software Vendor Forum

21st April 1983, Dubarry Room, Café Royal, 68 Regent Street, London, W1. Registration begins 8.30 a.m. for a prompt 9.00 a.m. start.

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Speakers include the following internationally recognised software authorities...




Tom Rolander, Vice President and Manager of Operating Systems Division, designed and implemented the Digital Research MP/M and Concurrent CPM operating systems. Rolander joined Digital Research, who won an OEM Application Engineering Manager at Intel. Rolander holds a BSc and an MSc in Electrical Engineering and Computer Science from the University of Washington.




Mike Lehman, Mike Lehman is one of the top figures in the software industry in the USA. He was the author of the industry standard PASCAL/M compiler. He founded M1 Microsystems which later joined with Digital Research, when Mike has been Director of Software Development and has been instrumental in developing Digital Research's advanced 'C' compiler system.




Fred E. Langhorel, Manager of graphics development at Digital Research. As a member of the recently formed Research and Development Group, he is responsible for design and implementation of graphics enhancements for the company's operating systems and compilers and is an active member of several international graphics standard committees. He holds a BSME from General Motors Institute and an MS and PhD from Purdue University.



Howard Kornstein, Howard Kornstein is one of the UK's most noted figures on the microcomputer scene. He was the Technical Manager for Intel Corporation UK and is well known as a spokesman on evolving trends in microcomputer systems and architecture. He is now Technical Director, Europe for Digital Research. He is actively involved in many UK professional bodies and is a member of the Editorial Board of the Journal Microprocessors and Microsystems. Howard Kornstein obtained his BSc at the University of California and his MSc at the University of Surrey.



Tony Dimont, Tony Dimont has thirteen years experience in the computing industry, covering office automation, mini-systems and software. He spent five years (starting an NPD-backed computer service company from a start up) into profitability and, after a three year spell as consultant with Logica, he joined the Board, Pergamon Press to diversify the group into computer applications. His specific responsibility at TDC covers investments in the computer industry sector.



Paul Bailey, Director of European Operations, is responsible for the company's three subsidiary operations in UK, Germany and France. He is also responsible for overall European management including European strategies, for managing the direction of the operating companies and for overall financial performance. He spent nearly ten years at Tektronix managing marketing and engineering for its graphics division in Europe. He also spent several years with the Ministry of Defence as a design engineer. He holds a BSc (Hons) degree in electronic Engineering.

Mator takes on 'unqualified' team

by John Riley

TEBNAERS are being taken in off the streets and taught to program in low level assembler by Sussex-based microcomputing specialist Mator Systems.

"We prefer to take teenagers who haven't been to Polytechnic or University, and we are not worried about whether or not they have A levels," said managing director Tony Pembroke. "In fact we find that those who have had further education seem to have lost a certain amount of competitiveness."

"In any case, some of our staff who have been to Polytechnics find that only 5% of the information they have learnt in four years

is of any use working with us."

Mator deals in two main areas: protocol converters and complete package sub-systems using Winchester disc technology. It is oriented to the technical market. The UK staff comprises some 25 people and the turnover is in the region of £1 million per year.

Mator, a British company, has an associate manufacturing company Mator Inc. based in Houston with a factory in Los Angeles. "We had intended to manufacture boards and devices here in the UK," said Pembroke. "But we found that there was too much red

tape and aggravation, especially when trying to set up a factory in Brighton. It was too much hard work, especially when we could set up a factory in 48 hours in Los Angeles, with the added advantage of cheaper components."

Altogether eight teenagers have been taken on in two batches, and are from diverse backgrounds. One was formerly a beauty therapist. Pembroke is pleased with all of them.

Mator does not give aptitude tests. "We advertise locally and interview: all applicants," said Pembroke.

Workplace is compiled by Philip Hunter.

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PEOPLE

■ Systems builder Micro Scope has announced four appointments. Carolynne Barnett, formerly Sunderland retail branch manager at Turista Worldwide Travel, has joined the company as program supervisor. Sara Jarman and Christine White have joined its programming team, working on the development of Micro Space systems. Jarman was formerly with Plus Computing and White was previously with Lacy's Business Systems. New junior programmer is Joe Popli, formerly a partner in import/exporter Rutlidge, before entering computing via a TOPS training course.

■ Package Programs Ltd (PPL) has appointed two consultants for its subsidiary PPL-Cyborg. Mike Smith joins from Baric Computing; Steve Broadbent was previously with Burroughs Machines; Sally May was formerly with ICL and John McAdam spent the last two years with City insurance and shipping company Andrew Weir.

■ Two salesmen have joined MBS Microtek. Brian Ekins was formerly with NCR and Systime and David Franks is also an ex-NCR salesman.

■ Chris Ramadale has joined Mastor UK as systems engineer. He was previously corporate MVS support specialist at Desdate Systems.

■ The Information Center (Kuwait) has appointed Ian James as its UK business consultant. His first task after setting up the Center's UK subsidiary, Flexidata, is to manage a training project for the Kuwaiti government. He was previously a consultant with Shell UK.



■ Derriek Muddern (above) has been appointed computer products sales manager at Shanyo Marubeni (UK). He will be based at Watford. He was previously with Teleprinter Equipment for four years, where he was sales and marketing manager.

■ The Overseas Development Administration is sending two senior systems analysts/programmers to Fiji to work under the UK's technical co-operation programme. Anne Heads was previously a programming team leader and systems analyst at Woolworth in Swindon, and Stephen Smith leaves his job as a commercial systems manager with a paint company.

■ Graham Gibson has been appointed supplies manager by Tycom. He previously worked in production control at ICL and GEC Measurements. Karl Simpson is Tycom's new head buyer. He previously worked for Rascal, Page Engineering, Hewlett-Packard and Texas Instruments. John Whitmore has been recruited as support engineer responsible for telecommunications and related activities. Previous experience in the telecommunications business has included spells with GTE Perami, Decca, and Marconi.

■ Gould SIB Computer Systems has further expanded its field sales force with two new appointments. John Ransford has joined the company as a sales executive covering South-west England. He was formerly with Calcomp. Paul James has been appointed sales executive for the North-west. He was previously with Hewlett-Packard.



■ Simon Bryan (above), currently manager of Dearden Farrow's computer services department, will become a partner in the company from April 9. He joined the firm of chartered accountants in 1980.

■ Neil Flynn has joined BOS software house MPSI as sales manager, special accounts. He was previously with Comshare for five years as senior sales executive.

David Harper

■ David Harper has joined the board of RTL Software Services, and not RTZ Software Services as stated in last week's issue. Harper joined the company from ICL where he worked for 21 years, lastly in managerial positions with Datacil.



With the firm belief that "history and high technology are an amazing combination" FBA Computer Services managing director Frank Burger has set up the company's new headquarters at the "Old Mill" in Godalming. The mill dates back to Norman times and is listed in the Domesday Book. Godalming itself has an historical claim to fame — it was the first English town to be "electrically illuminated". FBA Computer Services' most recent development was the launch of its CIBS integrated business system designed to operate on virtually any computer running under Unix with SMC Bit. Picture shows Frank Burger (left) with FBA's marketing director Ian Jones.

■ DPCE, the independent computer maintenance company, has made two board appointments. Harvey Tordoff, finance director of DPCE UK has been elected financial director of the parent company DPCE (Holdings). Jon Glegg-Gran, one of the company's senior engineering managers, has been appointed a director of DPCE UK.

■ Zynar has expanded its marketing operation with the appointment of two sales executives. Arthur Trick, who becomes European sales executive, was previously with USCL Microsystems. Peter Byrne joins Zynar from Metrotech.

■ David Roberts, formerly marketing manager with RTZ Computer Services, has joined Northern Software as marketing director.

■ Newbury Data is to double the size of its German subsidiary and has appointed Heinrich Schale (below) as general manager to lead this expansion. Schale was previously German district manager for Control Data.



DIARY

APRIL 6
Mix and Match — the plug compatible jungle. IDPM Central London branch, Althergo, Imperial House, 15-19 Kingsway, London WC2 6 00.

Branch AGM and presentation on the social implications of the new technologies. IDPM Sussex branch, Room G27, Mithras House, Brighton Polytechnic, Brighton, 7.00.

APRIL 11
Wine tasting and AGM. IDPM Norfolk branch, Castle Hotel, Castle Meadow, Norwich, 7.30.

Prentel's gateway to the world — a practical demonstration of the latest developments in Prentel by Granada TV Rental. IDPM Scottish branch, Lloyds & Scotts Orchard Brae, Edinburgh 4, 7.30.

APRIL 12
Visit to air traffic control centre. IDPM West London to Oxford branch. Numbers are limited, phone Maren Talbot on 01-349 8087 to book. Air Traffic Control Centre, West Drayton, 7.30.

APRIL 13
Robotics. IDPM Birmingham branch, New Imperial Hotel, Temple Street, Birmingham, 12.30.

APRIL 19
The past, present and future of word processing. BCS WP and Office Automation Specialist Group. Prudential Assurance, 142 Holborn Bars, London EC1, 5.30.

CONFERENCES

■ KERN Computers is holding two one-day conferences aimed at the DP manager controlling, implementing or managing a local area network. Speakers will include a number of users talking about why they chose to take the LAN route. Other speakers will look at LAN hardware and software. The sessions aim to be practical and applied. Cost for the day is £45 excluding VAT but including lunch. Venues are Imperial College, London on April 19 and Manchester University on April 21. Further details from Max Hopoff at Kern Computers on 01-236 3325.

■ A FIVE-DAY residential workshop on project management will be presented by Datasec Education between April 25 and 29. Intended for experienced analysts, it offers practical help on how to get systems projects on time, within budget, and which meet users' needs. Workshop topics include project planning and control, quality assurance, managing client relations, estimating development effort, the management of project teams. Fee is £395 + VAT and accommodation costs. Further details from Peter Finch of Datasec on 01-828 8104.

APPOINTMENTS

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Computer Operators

Due to an expanding work-load, United Dominions Trust has vacancies for two computer operators, for our IBM installation at Cockfosters.

Candidates must have 2 1/2 years experience on IBM 370/4300 equipment, using OS/VS1 and/or MVS, and be in the age range 21-25 years.

Knowledge of IBM JCL and utilities, and PDP 11/60 or 11/70 systems will be an advantage.

United Dominions Trust is a finance company and a member of the TSB Group. Working conditions are excellent and we operate a

3-shift, 5 day week system. An attractive remuneration package will be available. This will include a competitive salary plus shift allowance, non-contributory pension and life assurance scheme, mortgage subsidy, 4 weeks' holiday, and subsidised staff restaurant.

To apply, please write giving full details, or telephone for an application form to Personnel Manager, United Dominions Trust Limited, Holbrook House, Cockfosters Road, Cockfosters, Barnet, Herts, EN4 0DY. Telephone: 01-449 5533 ext. 264.



United Dominions Trust

SENIOR SYSTEMS ANALYST

Star Technologies, Inc. is a Portland, U.S.A., based company specialising in HIGH SPEED ARRAY PROCESSORS. Using advanced ECL gate arrays, the ST-100 is a powerful modular system which can support multi host/multi array configurations and has a computational speed of up to 100M floating point operations per second.

We anticipate a rapid expansion worldwide, and are looking for a fully experienced person to support pre- and post-sale activities in Northern Europe from our Berkshire office.

The successful candidates must be knowledgeable in the use of main frame and "midi computers" for scientific applications and be able to develop and run micro-programmed bench marks. Additionally, he or she must be communicative, personable and willing to travel.

Experience in Semantic Processing, Image Processing, R.T. Simulation and Large Scale Signal Processing will be an asset.

Extensive training will be provided at our U.S.A. facilities.

A competitive remuneration package (£14-18K) will include equity, private health insurance, flexible pension plan, a two litre car and 20 days' holiday per annum (minimum).

This is a challenging opportunity to join a young, dynamic company in its early phase of growth. For further details, please contact the U.K. Branch Manager.

STAR TECHNOLOGIES, INC.
Cory House, Bracknell, Berks RG12 1ES
0344-54471

(3082)

DATA COMMUNICATIONS

Technical Director £ Negotiable Communications Consultant c.£17,800 + Car

This is a truly exceptional opportunity within a thriving and highly successful enterprise. The client is renowned for its continued technical innovation and product excellence; additionally it is recognised as a vigorous sales organisation with a strong marketing orientation. You will be fully responsible for all technical activities (design, maintenance, support, service) as well as for defining pricing levels, production scheduling, new product development etc. The opportunity to shape the company's future is apparent.

You should have a first class track record of achievement within the data communications industry allied to a sound awareness of current and future trends. Essentially, you will be capable of managing a high growth business from board level and of directing the company's technical resources to best effect. The remuneration package will reflect the seniority and importance of the role.

For further information, telephone Paul Child on Windsor (07535) 56155 from 8.30 to 6.30 or on 04868 7403 from 8.00 p.m. Alternatively write to Kramer Westfield Associates Limited, 23 Victoria Street, Windsor, Berks. SL4 1HJF.

Kramer Westfield

(3058)

Computer Operators

Bournemouth

£6,500 to £8,300 plus benefits

Remuneration inclusive of Shift Allowance
Benefits include relocation package and mortgage subsidy (where applicable), non-contributory pension, free life insurance, subsidised restaurant, Sports and Social Club and ITT products staff discount shop.

Requirements

Abbey Life have vacancies for Computer Operators with experience of MVS/JES2 (VS1 would be considered). Knowledge of JCL and utilities, ROSCOE or CICS/VS would be an advantage.

The Company operates a 5 day three-shift system, currently under MVS on twin 8 Megabyte IBM 4341 CPUs with ACF/VTAM, CICS/VS and ROSCOE.

Please write or telephone for an application form to: Val Hastrop or Alison Potter
S & DP Technical Recruitment
Abbey Life Assurance Company Ltd
80 Holdenhurst Road
Bournemouth BH8 8AL
Tel: Bournemouth (0202) 292373 ext. 4444



Abbey Life

(3083)



Wembley Conference Centre April 26-28 1983...

The Computer Trade Show '83 is the most important annual event of its kind and there could be no better starting point on the route to achieving bigger profits from this expanding and lucrative market. Held at one of the most accessible and popular exhibition centres in the United Kingdom and set in the heart of the biggest and most influential market region for computer systems, The Computer Trade Show '83 will provide you with the perfect opportunity to select equipment to meet your individual requirements from a wide selection of products to be shown by the major manufacturers and suppliers of computers and peripherals. First hand knowledge of new product lines will keep you ahead of market trends, and face to face contact with suppliers through a series of daily seminars will greatly assist your current purchasing power and ensure even bigger profits in the future.

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CAREER MINDED ... ? analyst/programmers to 12K

The pace of computing within all sectors of industry is changing. Traditional techniques are rapidly being replaced by new hardware and software disciplines together with a different attitude towards the development and implementation of computer systems. Now, more than ever, it is vital that you have a thorough understanding of commercial business and possess a creative and innovative approach towards system design. Where better to enhance your professional skills than in a dynamic young systems house hungry for further success. Our client, having already established a first-class reputation and impressive client base, is committed to future growth. They recognise the role of the individual and realise that success is dependent upon the effort and contribution of talented professionals. They can provide an environment where ambitions can be fulfilled. The Company's services combine the development of

highly marketable software packages with the design of bespoke systems. These together with an investment in a variety of hardware products, will provide a highly profitable and secure future. To keep pace with what is a very exciting stage of the Company's development, they wish to recruit additional Analyst/Programmers who can demonstrate a sound technical background with the type of personality most suited to a Systems House. Flexibility is a key word and the selection criteria covers a broad range of skills. Ideally you will already be working in the service sector, however those from a profit orientated user environment should still apply. You will have a sound COBOL programming background and be able to play a major role in the design of commercial applications. Your most recent experience will be in the development of on-line, interactive systems - and it is essential you fully understand how a company works.

You will be communicative and able to establish and control relationships with all levels of client management. Your ability to grow and realise your full potential is considered the fundamental attribute. The immediate career prospects are outstanding and after familiarising yourself with the Company, its products and clients, you will be expected to rapidly develop into a full project management role. Room to grow is as important in a social sense as it is in terms of your career. The Company is based just outside Oxford providing a very attractive rural location. It is in a low-cost housing area and whatever your life-style there exists an excellent range of social amenities. The starting salary is highly competitive and in addition there is a good benefits package including an Annual Bonus. To find out more about these interesting opportunities and to arrange an immediate appointment for interview contact the Company's consultants on the number below.

Telephone: 01-995-7952 now or 01-373-7417 (4 lines)
Grenville Associates
Unit 1, Longshot Court
76 West Cromwell Road,
SW5.

OUTSTANDING OPPORTUNITIES IN TECHNICAL SUPPORT

Birmingham

We have been retained by one of the fastest growing super-micro companies to recruit a number of hardware and software specialists for their UK support team. With its HQ based in the USA, this young, dynamic organisation has over achieved during its first year in the UK and has exciting but realistic short-term plans to expand into Europe. The state-of-the-art hardware design, powerful multi-user operating systems, high level languages, responsive support and price-performance edge, add up to a tremendous future. These positions carry the normal benefits associated with a leading computer company.

TECHNICAL SUPPORT CONSULTANT £10-12K + car
If you possess solid communications hardware knowledge with in-depth technical software experience of UNIX type systems, plus sound appreciation of such languages as PASCAL, FORTRAN, or C, this opening will present a stimulating challenge. Networking and/or Database expertise would be useful.

SOFTWARE SUPPORT SPECIALIST £8-10K + car
This person must have considerable 'hands on' UNIX experience together with working knowledge of either PASCAL, FORTRAN, or COBOL, or Assembler. The successful candidate will probably be a well-qualified programmer/analyst currently working in an academic environment but looking to broaden his/her experience with a leading manufacturer.

HARDWARE TECHNICIAN £8-10K + car
You will be an experienced mini/micro engineer with true management potential. Responsibilities will include servicing selected customers, co-ordinating administration matters, maintenance scheduling, and spares control. This position will best suit a young, energetic engineer with the necessary ambition and drive to succeed in a fast moving computer company. Knowledge of relevant systems software would be a distinct advantage.

Please send full CV to:
Vic Chivers
SEARCH DYNAMICS LTD
Edgbaston House
3 Duchess Place
Hagley Road
BIRMINGHAM B16 8NH
Tel 081-455 7811

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SENIOR ANALYST/ PROGRAMMER

DOS/CCF/CICS EXPERIENCE

BAHRAIN £17,000 p.a. (Tax Free)

The General Organisation for Social Insurance has recently taken delivery of an IBM 4331 computer running under SXX/VSE.

A Senior Analyst/Programmer is required to lead a small team (4/5) Analyst/Programmers in the development of on-line applications using CICS with VSAM files. The Organisation has, during the last two years, developed a large database of information concerning insured workers on the island. This data is currently being maintained by batch application systems; the delivery of the IBM system will permit on-line access to the database in the first instance. It is planned to move to a database organisation together with on-line data entry. In parallel with the development of further application systems during the coming year.

The successful candidate should be educated to degree level and have an in-depth knowledge of CICS preferably gained in a DOS environment.

Reporting to the Computer Manager the Senior Analyst/Programmer would be expected to both supervise and train an experienced team of Analyst/Programmers in the effective use of CICS software.

An initial 1 year renewable contract would include free accommodation and five weeks' annual holiday together with a contract completion payment.

Applicants should write to the Computer Manager by April 15th in the first instance enclosing details of age, marital status, education, etc together with brief history of career to date.

General Organisation for Social Insurance
P.O. Box 5319
Bahrain

(3084)

IBM S/38 PROGRAMMER/ANALYST

Who we are: Boston Trust & Savings - a growing consumer finance company specialising in providing credit, mortgages, savings and insurance services direct to members of the public. We have 28 money centres throughout the United Kingdom, and more are planned.

Who we want: The Company is about to develop a new computer system on an IBM System 38 to replace an ICL bureau facility. We wish to recruit a Programmer/Analyst to work on the initial project (in the Bank of Boston's London Office), and to take charge of subsequent development at St. Albans where he/she will report directly to the Financial Controller. The successful candidate will be aged about 25, with 3-5 years of RPL or IBM S/38, or RPL III. A proven track record of successfully completed projects is essential.

What we offer: This is a permanent position offering a good negotiable salary, and initially 3 weeks annual holiday. Non-contradictory pension, life insurance, WPA medical insurance, subsidised loan and mortgage facilities after qualifying period. Please write or telephone: Peter O. Cornfield, Financial Controller, Boston Trust & Savings Limited, Boston House, Lower Dagen Street, St. Albans, Herts AL3 4PG. Tel: St. Albans 32241.

BOSTON

(3088)

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We are a fast growing WANG and HONEYWELL Systems and Software House. Our specialty is in commercial applications as part of turnkey systems where providing software consultancy skills to a large number of international corporations.

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If you can demonstrate these qualities, please send your CV to Stuart H. Allen, Technical Director.

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2 The Grove Slough SL1 6EP
Tel. Slough (0754) 78167

(3078)

PROGRAMMER/ANALYST LANSDOWNE HOSPITAL

We are looking for a Team Leader for our Programmer/Analyst in the Management Services Organisation. Approximately five years' experience of computing required, not necessarily within the National Health Service. Experience with RSX II M/Mumps or CPM essential.

Salary £8,367-£10,277

Further details may be obtained from: Dr. M. Brown, Management Services, Lansdowne Hospital, Cardiff. (0222) 20581.

Application forms available from: Personnel Department, South Glamorgan Health Authority, 14th Floor, Pearl Assurance Building, Greyfriars Road, Cardiff.

Closing date: 14th April, 1983.

(3102)

**South Glamorgan
Health Authority**

QUEEN MARY COLLEGE University of London PROGRAMMING AND APPLICATIONS SUPPORT DISTRIBUTED ARRAY PROCESSOR SUPPORT UNIT

The Unit is part of the QMC Computer Centre providing a national service for users of the DAP. Housed in special purpose-built accommodation, the Unit fosters research on the use of parallel machines, produces software, advises users and acts as a focus of information on parallel machines. A PROGRAMMING CONSULTANT is sought to assist in this work, ideally with at least 2 years' experience in scientific/technical computing and interested in helping others solve their problems on a new type computer.

Initial appointment to 31 July 1985. In range £8,376-£9,370 p.a. + £1,108 London Allowance. Applicants should send further details available from The Secretary, Queen Mary College, Mile End Road, London, E1 4NS, to be returned by 30 April.

(3028)

CITY OF BIRMINGHAM POLYTECHNIC COMPUTER CENTRE

SENIOR LECTURER IN SYSTEMS ANALYSIS

The main task, initially, is that of developing a Management Information System for the Polytechnic's administration. Thereafter conventional lecturing duties will follow mainly on Business Computing courses.

LECTURER II/SENIOR LECTURER IN COMPUTING STUDIES

Duties include the development of computer systems, particularly in the area of education and teacher training. The post is tenable for 2 years in the first instance.

LECTURER II IN COMPUTING STUDIES

To lecture on HND, professional and degree courses, mainly for business, and to assist relevant departments in their use of microcomputers.

SENIOR LECTURER £10173-£11964 (inc) £12819 p.a.
LECTURER II £8565-£11622 p.a.

Further details and application forms (to be returned by 15th April, 1983) from: The Personnel Officer, City of Birmingham Polytechnic, 11th Floor, Perry Barr, Birmingham B42 2GU. Telephone 021 358 9193 ext. 218.

(3091)

Mr. John Hay, Director of Personnel and Training, Brighton, Sussex, etc.

ARABIAN DATA SYSTEMS, the leading Saudi Arabian consulting group with their headquarters in Jeddah, have a major contract, which together with the continued expansion of their existing projects has generated the need to fill the following positions with start dates scheduled from now till August.

DATABASE ADMINISTRATOR 30XX £20,000-£30,000

A minimum of five years working with IBM hardware with at least three years on IMS or ADABAS is essential, ideally in an OS or MVS TP environment. A degree or professional qualification is desirable.

SYSTEMS PROGRAMMERS £20,000-£30,000

- 3031/3033 - a minimum of five years' programming experience is essential. The applicant should be capable of supporting MVS/JES2, ACF/VTAM and ACT/NCP.
- 30XX likely upgrade to 3081 - a minimum of five years' programming experience is essential, with at least three years' OS/VS1 and VM.
- 43XX - a minimum of five years' programming experience is required. The applicant must be capable of installing and supporting DOS/VSE, DL1 and CICS.

PROGRAMMERS & ANALYST PROGRAMMERS 30XX & 43XX £16,000-£20,000

A minimum of four years' DP experience is essential with at least two years' working in a CICS, DL1, COBOL environment.

DOCUMENTATION SPECIALIST £15,000-£18,000

A minimum of five years' DP experience with at least three years' User Documentation in an IBM environment.

OPERATIONS STAFF 30XX, 43XX £11,000-£20,000

- SHIFT LEADERS, min. five years' experience, circa £16,000 + shift.
- SENIOR OPERATORS, min. four years' experience, circa £12,500 + shift.
- OPERATORS, min. two years' experience, circa £11,000 + shift.

All positions must have MVS/JES2, the senior positions also require ACF/VTAM, NCP, IBM JCL and ideally exposure to FDR & TMS.

ANALYST/PROGRAMMER DG ECLIPSE £15,000-£19,000

For the development of admin systems. A minimum of three years' experience developing COBOL programs ON LINE and experience of AOS 3.4 and INFOS II is essential.

INITIAL INTERVIEWS from 10th APRIL

For further details, please contact Jenny Dalrymple-Hay or Ian Murray-West weekdays (8 am to 10 pm) on 01-493 2947 or weekends respectively Beaconsfield (04946) 4679 or Milton Keynes (0908) 563415.

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Bush House, 72 Prince Street, Bristol BS1 4HU Tel (0272) 277399 Telex 449205

SOFTWARE DEVELOPMENT CO-ORDINATOR LLANELLI

We are a leading manufacturer of heat exchange components and heat frames in the Automotive Industry and now need a person to design, develop and implement software applications for all areas including Manufacturing, Engineering, Finance and Supporting Administrative functions.

A complex and active programme of systems development backed by substantial investment resources is taking place and offers a unique opportunity to introduce original software design and innovative techniques based on a CMC Ssqule 1 Megabyte CPU with 35 on-line VDUs and together with word processing equipment and a variety of micro computer systems.

Applicants should be graduates in Computer Science with several years' experience in on-line systems, application software development and data base design with a proven track record of implementing major projects using fourth generation languages.

Salary will be competitive and fringe benefits include a car leasing scheme and relocation expenses where appropriate.

Reply to: Personnel Dept., Unipart Group Ltd, Unipart Redstone, Nuffield Works, Fallowfield, LLANELLI, Dyfed SA14 8HU.

TRAINING OPPORTUNITY REQUIRED

Intelligent male in twenties seeks employment as a Trainee Computer Programmer or Trainee Computer Operator using mainframe machine. I have rudimentary knowledge of a small system plus a wide range of banking/accountancy experience. Willing to work for experience only for the period. Areas preferred: London, South-East, Midlands.

Reply to Box No. 1251, Computer Weekly, Quadrant House, The Quadrant, Sutton, Surrey. (3047)

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This is a key position within Micronet 800 and the successful candidate must exhibit a high degree of imagination, self-discipline and maturity. Such qualities will be regarded as important as a background in publishing or in micro computer software.

Starting salary negotiable according to experience.

Please write enclosing a full c.v. to: Database Development Manager, Micronet 800, Bushfield House, Orton Centre, Peterborough PE2 0UW, to arrive not later than the 14th April, 1983.

ANALYST/ PROGRAMMERS

(£9K to 12K)

COMMUNICATIONS AND NETWORKING SOFTWARE

INTERNATIONAL OPPORTUNITIES LONDON BASED

Aregon has established an international reputation in videotex systems. This success, particularly in transaction processing applications, is leading Aregon into new fields of software development. Analyst/Programmers are invited to take part in Aregon's business expansion and to work on projects which include:

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Opportunities exist at different levels for people who have skills from among the following: VAX, PDP/11, VMS, RSX, Fortran, Macro, protocol emulation and commercial applications including database products. Analyst/Programmers with some of these skills wishing to expand their experience in a stimulating environment should apply in writing or by telephone to: John Graham, Managing Director, Aregon Products.

AREGON

17 Lincoln's Inn Fields, London WC2A 3EG
Telephone 01-831 7536

NEW ZEALAND GOVERNMENT

Computer Services Division STATE SERVICES COMMISSION

Vacancies currently exist for the positions advertised below in three of the centres operated by the Computer Services Division of the New Zealand State Services Commission. The Division provides computer services and

advice for the majority of New Zealand Government Departments and is organised into a Head Office, four computer centres and a number of input centres.

Head Office

— responsible for investigating departmental requirements, undertaking hardware and software evaluation, providing overall plans to co-ordinate and control future EDP requirements and advising Government.

Cumberland Computer Centre (Wellington)

— operates an IBM 3081-G using MVS/TSO/IMS/CICS — providing a wide variety of development and processing services to twenty-six Government Departments — Applications development facilities used include Cobol/Mantis/SAS/APL and ADRS-II.

Trentham Computer Centre

— located twenty miles north of Wellington in the city of Upper Hutt. Provides service relating to scientific and statistical work through a series of RJE terminals. The centre is equipped with dual ICL 2980, 13M Bytes and supports a large interactive and transaction processing network using IDMS as a database.

Pipitea Computer Centre (Wellington)

— provides services relating to tax collection, welfare payment and land valuation. The centre is equipped with three Burroughs B3900 systems supporting a nationwide network of six hundred terminals and thirty-eight mini-computers.

Wanganui Computer Centre

— Wanganui is a pleasantly situated provincial city on the West Coast of the North Island. The centre is equipped with a Univac 1100 3 x 2, and a Univac 1182 which provide services for the law enforcement functions of the Department of Police, Justice and Transport.

Applications are invited for the following positions:

Cumberland Computer Centre

1. Systems Analysts or Senior Programmers (2 positions)

Four or more years' relevant data processing experience including some Cobol programming. (Applicants for senior programmer require experience on IBM mainframes). Salary range between NZ\$15,414-NZ\$23,761.

2. Systems Programmer or Senior Systems Programmer (1 position)

Two or more years' relevant experience with any of the following: MVS, IMS, or SNA COMMUNICATIONS PRODUCTS. Salary range between NZ\$14,388-NZ\$23,761.

3. Senior Data Processing Operator (3 positions)

At least five years' experience specifically MVS/JES2, TSO, IMS/DC, Network Control, IBM Job language. Salary range between NZ\$19,394-NZ\$20,866.

Pipitea Computer Centre

4. Systems Analyst (2 positions) and Senior Programmers (2 positions)

Five years' practical data processing experience. Salary range between NZ\$15,414-NZ\$23,761.

Trentham Computer Centre

5. Systems Analysts (2 positions)

Experience and salary as four above.

Assistance will be provided to staff recruited in the United Kingdom to move their family and effects to New Zealand.

For further information and application forms, please contact:

EDP Recruitment (Imm 2/336/12)
c/o Chief Migration Officer, New Zealand High Commission
New Zealand House, Haymarket, LONDON SW1Y 4TQ
(Telephone: 01-930 8422)

Closing date for applications: 13 May, 1983.

CHIEF, RESOURCE MANAGEMENT UNIT

The World Bank, a leading international institution in the field of economic development with headquarters in Washington, D.C., invites applications from qualified men and women for the position of Chief, Resource Management Unit, (RMU), in the Information Resource Management Department (IRMD).

Information Resource Management is a concept recently endorsed by the Bank that brings together data processing, office technology, and electronic communications networks. The IRMD is the central organization responsible for planning, policy, consulting, and operation of the Bank's major computer systems.

This position was created to provide centralized staff support to IRMD line management. The primary objective of the RMU is to monitor and evaluate the utilization of departmental resources to ensure an efficient and cost-effective operation in a charge-back environment. The position has both an intra-departmental and Bank-wide focus. Within the IRMD, the RMU Chief must be innovative and creative in the development of many new computer systems, including a billing/accounting system, and various performance evaluation systems. The RMU develops all IRMD intra-departmental policies, procedures, and standards.

Outside the IRMD, the incumbent is required to interact with a variety of Bank staff to audit decentralized computer systems and assess service delivery versus established service levels and develop or coordinate the development of approaches to improve resource performance.


The successful candidate must display a wide range of Managerial and Technical skills in:

- i) overseeing the design, implementation, maintenance, and monitoring of various integrated Management accounting and control systems.
- ii) authoring policies and operating procedures to support the Department's internal operations and its Bank-wide responsibilities;
- iii) providing the Department ongoing services in the areas of budgeting, billing, procurement, and contract administration and general administrative support;
- iv) evaluating the obligation and performance of all financial, information processing, and other physical resources managed or monitored by the Department;
- v) serving as a source of technical review and assessment capability, both for Departmental Managers and user community, for matters requiring resolution, modification, and development of alternative solutions and ensuring the implementation of the selected option.

MINIMUM REQUIREMENTS

- 1) Master's degree in Business or Public Administration or its equivalent.
- 2) Broad and extensive knowledge of financial, administrative, and technical management systems.
- 3) Experience in establishing and running a charge-back billing system in a complex organization setting.
- 4) Proven ability to manage in a complex, dynamic, project-oriented business environment, indicating good planning and organizational skills and an understanding for the need for controls, systems maintenance, and monitoring.

The World Bank offers a competitive salary and benefits package. The position is based at the Bank's Headquarters in Washington, D.C. Please send a detailed curriculum vitae, quoting reference No. 3-3-UKG1001 to:

 **The World Bank**
Staffing and Planning Division
1818 F Street, N.W.
Washington, D.C. 20433, U.S.A.

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Software House seeks IBM System 34 and System 38 Programmers/Analyst Programmers to work on challenging new projects in London and surrounding area. Successful applicants with two years' experience in RPGII or RPGIII will substantially increase their present salaries, their technical knowledge and their career prospects with this established and rapidly expanding company. Ref. A1

INSURANCE IN THE CITY

This company, a major force in the International Insurance Markets, is currently seeking Analyst/Programmers and Systems Designers to work on their IBM mainframe in the City. Your COBOL or PL1 programming background combined with some experience of Analysis and/or design will commend a salary of up to £13,000. Ref. A2

IMS OR CICS? £9,000-£13,500

Our client, based in West London/Middlesex utilizes dual IBM mainframes and is seeking to recruit IMS or CICS Analyst/Programmers for a variety of development projects scheduled for 1983/4. COBOL, PL1 and APL are all used within the data processing department and a minimum of two years' programming expertise with IMS or CICS is required in order to enjoy the numerous company benefits offered by our client. Ref. D1

**COBOL PROGS & ANALYST/PROGS
£7,000-£11,000**

The systems development team within this successful London based company is constantly expanding in order to meet demand from its UK subsidiaries. Hence our client is seeking to recruit a number of COBOL professionals keen to progress their career in an interactive, database environment. Candidates should possess a minimum of 18 months' main or mainframe COBOL. You will be given the opportunity to join a friendly team within a challenging environment and learn new techniques. Ref. D2

These are just some of the career opportunities that we are currently assisting our clients to fill. We would be pleased to talk to you regarding these and many other vacancies that we are currently aware of. Telephone one of our consultants to discuss your particular requirement and how DP Selection can help you.

dp SELECTION SERVICES
A member of the DP Support Services Group

7 Swallow Street, London W1R 7HD
"We look forward to hearing from you."

01-434 2042
(24 Hour Answerphone)

SENIOR IBM PROGRAMMERS To £13,000

This dynamic Services organisation based on the Bucks/Berks border is seeking to appoint several Senior Programmers offering at least two years' experience in PL1, 370/303n COBOL or 8100 COBOL. Applicants should possess knowledge of Database and/or TP and be confident to assume responsibility for small projects when required. Self-motivated individuals will enjoy the fast moving environment and be rewarded with high salaries and quick promotion. Ref. K1

YOUR 2nd JOB To £10,000

With at least two years' COBOL programming experience, our client can offer applicants an excellent career move into an Analyst/Programmer role at their IBM 4331 DOS/VSE installation in NORTH SURREY. Good IBM knowledge, experience of VSAM and the ability to liaise competently with users will provide you with the opportunity to join a stimulating DP environment working on Stock and Financial Recording systems. A good range of benefits also apply. Ref. K2

SYSTEMS ANALYSTS - YOUR NEXT PROJECT

If you can offer at least two years' commercially based systems analysis experience then our client, a very successful financial organisation, could offer you the opportunity to join an on-line, distributed processing system development based upon very powerful minis linked to a mainframe. Career development in this business analyst role exists and a commencing salary of £12,000 can be expected for this company based in NORTH SURREY. Ref. R1

COBOL, CICS & DL/1 To £10,000

Our client, located in the CITY OF LONDON, is seeking to recruit PROGRAMMERS or JUNIOR PROGRAMMER/ANALYSTS to join their CICS DL/1 project environment. The people appointed can look forward to gaining exposure to program design and analysis to provide them with career progression. If you can offer around two years' COBOL then telephone us now to progress an application. Ref. R2

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SYSTEM 38 ANALYST/PROGRAMMERS**

1 year + - Belgium

Ground floor opportunity to become involved in a major new development. CW/E/18

**ANALYST/PROGRAMMER
1 year + - Brussels**

To join a team engaged on the development of European Sales/Marketing/Distribution Systems. Skills should include PL/1, CICS and either TOTAL, DL/1 or IDMS. CW/E/19

**PRIME SYSTEMS PROGRAMMER
Brussels**

A highly proficient technician is required with an in-depth knowledge of Prime Internals and performance planning/tuning. Candidates should be capable of setting up I/O on Prime and have had exposure to comms. pref. Prime net.

**BUSINESS ANALYST
1 year + - Holland**

To undertake a significant Project for a major company. Previous exp. within a production environment coupled to a knowledge of COPICS is essential. Broad commercial awareness and proficiency in the Dutch language important.

**DEC/VAX PROGRAMMERS
Holland**

Fortran Programming knowledge and previous experience within the Steel/Heavy engineering or process control industries. Start June/July '83.

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With Cobol and Dutch language ability. Immediate start.

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Telex 268312 Wescom G/Atten Shu Smith.

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OPPORTUNITIES**

TECHNICAL SYSTEMS SUPPORT
Brussels based with travel

Exceptional tax free salary plus superb range of benefits. A prestige financial organisation with its international headquarters in Brussels is seeking a highly skilled professional to take on a challenging and demanding technical advisory role. The successful candidate will enjoy senior level responsibility and will be given every opportunity to influence future development. Key areas of experience should include DOS/VSE, MVS, CICS, DBL, VSAM and database. This is an exceptional opening for an ambitious person to develop a career in a European environment. Ref. CW/E/13

CONSULTANTS

A highly respected systems consultancy with a well-developed client base, is seeking professionals with a background in either process control, petro-chems, or graphics to provide high-level expertise to major organisations within Holland. Candidates will enjoy working in a problem-solving and advisory capacity and should be able to combine proven hardware/software expertise with strong communication skills. An ability to speak Dutch is not essential. An attractive package is offered including full relocation and car. Ref. CW/E/14

**CONSULTANT/PROJECT MANAGER
West Germany - U.K. based**

A leading international consultancy with an impressive record of growth requires a German speaking professional to spearhead and develop a major initiative in W. Germany. Candidates should possess marketing and project management skills together with experience of real time systems and communications, minis/mainframes particularly IBM/ Nixdorf or Siemens. Ref. CW/E/15

**SYSTEMS SOFTWARE SUPPORT
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A dynamic organisation with a highly successful range of information Technology products is seeking specialists with the following: DOS/VSE and/or VM, CICS, ASSEMBLER together with Systems Prog. and client support skills. Situated in one of Europe's most beautiful areas they are able to offer both technical challenge, genuine career progression and a package which includes full relocation and 6 weeks' holiday. German language ability, whilst useful, is not essential. Ref. CW/E/16

**HONEYWELL ANALYST/PROGRAMMER
Belgium**

To work in one of Europe's most exciting cities. Experience on Level 6 with Cobol and good analytical skills. Ref. CW/E/17

If you are considering an overseas move and have not seen a position to match your skills on this page, please call us anyway. We can probably help you.

CLIENT ENQUIRIES WELCOME

If you have a genuine motivation to take up the overseas challenge, call me, Ray Parker, without delay on either 01-491 4653 or contact me any evening over Easter weekend between 6-8pm on 01-660 7665. Alternatively, please forward your curriculum vitae. Initial telephone interviews can be arranged for those currently working abroad.

**MANAGEMENT &
EXECUTIVE SELECTION**

telephone
01-637 9611

ENGINEERS

MES Engineering Division has been recruiting all levels of engineers for the computer industry over the past seven years.

Below are a selection from our current vacancy file:

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Sophisticated systems. On-going product training; excellent career prospects. Applicants will have two years' mainframe/minis/peripherals experience. (3309)

FIELD SERVICE

Yorks/Lancs/Midlands from £12K Package + CAR
All levels. Large systems background, e.g. Honeywell, Univac. Major manufacturer, latest technology. (3310)

DEC SYSTEMS

UK Wide to £13K + CAR
Several opportunities exist throughout the UK to work on DEC systems. A DEC background is of interest but many positions include full product training. (3311)

COMPUTER ENGINEERS

Berks/Bucks/Sussex to £10K + O/T + S/BY + CAR
Leading manufacturer requires flexible engineers with good customer skills. Leading-edge technology, substantial benefits. (3312)

For further details contact Chris Bond on 01-637 9611

Suite 201/6 Albany House, 324 Regent Street London W1
**MANAGEMENT &
EXECUTIVE SELECTION**

**Dan Lampert
Computer Operator
Saudi Arabia**

My client is seeking a Computer Operator who can design data for use in collecting information on manpower within the Petromin organisation. Familiarity with Apple II computer would be an advantage. You should be a graduate or with an equivalent qualification and have a few years experience. Preference would be given to a candidate with fluent Arabic.

The minimum salary being offered is

\$35,000 (US) per tax free
with free single or married accommodation,
good leave and many other company
benefits.

Write immediately and in complete confidence to:
Dan Lampert, BSc (Eng) FICE, FIMechE,
Personnel Consultant,
Double L Consultants Limited,
Suite 1, Harcourt House,
19a Cavendish Square,
London W1M 9AD
Telephone: 01-629 2743

**SYSTEMS ANALYSTS
£2600-£10,071 p.a.**

Applications are invited from people experienced in systems work. There are three positions to be filled. The successful candidate will have at least three years' relevant experience and should be able to demonstrate a record of successfully completed projects. A degree or professional qualification would be an advantage. Successful candidates will be involved in new applications development work whilst maintaining and modifying existing systems. The Council owns a Honeywell Level 6a DPS 100 computer with associated terminal network and a large number of distributed minis and mainframes.

A Union Membership Agreement is in operation.

Application forms from the Directorate Personnel Officer, Directorate of Finance, Britannia House, Hillingdon, Bedford, B51 1HX or telephone Bedford 72877 ext. 7704. Ref. P289/CW

City of Bradford Metropolitan Council

We are an equal opportunities employer and welcome applications from candidates of any age, sex, race or disability unless otherwise stated.

**Regional Computing
Services Officer**

Scale 27 £12,958-£16,524 p.a.

Health Authorities in the Oxford Region (covering Oxfordshire, Buckinghamshire, Berkshire and Northamptonshire) are engaged upon the implementation of an advanced computing strategy in contract with ICL. The Oxford Regional Health Authority provides computing facilities for hospitals and other health care services throughout the Region and has on site a Regional Computer Unit providing a bureau service covering a wide variety of applications including accounting and other health service systems as well as an advisory service to many functions.

The officer appointed will report directly to the Regional Administrator, advise the Regional Team of Officers and the Regional Computer Policy Committee on computer policies and plans and co-ordinate and develop computing activities within the Region. He/she will have had senior experience in the computing field, demonstrate a high level of management ability and ideally, will possess a degree and/or suitable professional qualification. Experience or knowledge of health service computing would be an advantage.

Candidates wishing to discuss the post informally should ring the Regional Administrator, Mr. P.M. Cooke on Oxford (0865) 44861 Ext. 208.

Further details and an application form available (quoting Ref. No. V30/83) from:
The Recruitment Officer,
Oxford Regional Health Authority,
Old Road,
Headington,
Oxford OX3 7LF
Telephone No. (0865) 44861 Ext. 246/228
Closing date: 15th April, 1983.

Oxford Regional
Health Authority

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London and Midlands

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You are a sales professional who has enough energy to spend 50%+ of his time overseas and still generate enthusiasm in others.

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Our client is a U.K. company which specializes in the design, development and implementation of systems for the IBM System/34 and /38 marketplace. Its Business System/34 and Business System/38 comprise the most comprehensive range of program products available.

In accordance with this philosophy of excellence, the company has developed, and has world-wide rights to market that version of FCS-EPS which runs on the IBM System/34 and System/38 range of computers.

We are looking for a young successful and ambitious Salesman, with experience selling financial planning and modelling systems. His role will be to stimulate sales of FCS-EPS on the IBM System/34 and System/38 range through the existing network of EPS sales offices in the U.K., Continental Europe, USA, Canada, Far East, Middle East and Australasia.

The company is young, successful, growing rapidly and in a position to offer long-term career opportunities. With a product which is one of the most respected and widely used business planning and modelling systems in the world, selling into a market of 100,000 installed System/34 and System/38's which is increasing daily; this must represent one of the most attractive sales opportunities available.

For further details phone Kevin McCourt or write enclosing full C.V. Interviews will be held in Reading and Central London.

MCL

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Tel: Reading (0734) 595346

WANTED

- PROJECT LEADER
- SENIOR ANALYST/PROGRAMMERS
- ANALYST/PROGRAMMERS
- SENIOR PROGRAMMERS
- PROGRAMMER

Come and work for a market leader where your skills are appreciated – and rewarded!

Nestlé One of the world's major food manufacturers pursue an active policy of computerisation throughout their organisation and due to recent expansion now require further staff for their Croydon Head Office.

Not only is Nestlé a large and successful company, but it also offers that rare commodity – A FRIENDLY WORKING ENVIRONMENT. Excellent competitive salaries and a great benefit package including flexi-time, over 4 weeks holiday a year, a subsidised restaurant, and contributory pension scheme.

PROJECT LEADER

The successful candidate will be responsible for investigations into both manual and computerised systems and their subsequent development or enhancement. It is envisaged that he/she will have between 7 and 10 years data processing experience and will have a sound knowledge of COBOL, CICS, and PL/I. Experience of managing a programming or analysis team is desirable.

ANALYST/PROGRAMMERS

This will give individuals with 3/4 years COBOL experience the opportunity to develop their technical skills with a COBOL, CICS, PL/I development team. CICS and PL/I experience is preferred but not essential.

SENIOR PROGRAMMERS

You will be responsible for the maintenance of various systems and will have a sound knowledge of both COBOL and ASSEMBLER.

PROGRAMMER

With not more than two years COBOL experience in an IBM environment you will be involved in the maintenance of various systems.

SENIOR ANALYST/PROGRAMMERS

You will have 3 years programming and 3 years analysis experience together with a sound knowledge of COBOL, CICS, and PL/I. In addition you will have been involved in projects from the initial conception through to implementation.



For further details and an application form, please contact:

Nic Poland
TLP
Leon House, High Street, CROYDON,
Surrey CR9 3NH TEL: 01-686 5856

EUROPE
to £21,500 p.a.

IBM
Senior Analyst/Programmer
Analyst/Programmer
Programmers

Our client is currently seeking a team of IBM experienced Analyst/Programmers and Programmers to support a long term information retrieval project on the continent.

Senior Analyst/Programmer

Working in the Software Division you will be responsible for managing a team of four people whose objectives are: The creation of software to support existing and new Database, improvement of existing files, support services and the generation of accounting and statistical programs. The successful candidate should have a degree in computer science, at least six years' programming to include IBM JCL, Assembler, COBOL, and PL/I. Familiarity with retrieval techniques, Database and Text processing, have proven management skills. DLM13/1

Programmer/Analyst

Reporting to the Senior Programmer/Analyst you should have a degree plus at least five years' programming experience and the ability to program in IBM JCL, Assembler, COBOL, PL/I and be familiar with retrieval techniques, Text processing and Database operations. DLM13/2

Programmers

Reporting to the Senior Programmer/Analyst you should have HNC or equivalent in computer studies subject several years' programming experience gained in large Database operations and the ability to program in several of the following: IBM, JCL, Assembler, COBOL, PL/I. DLM13/3

Senior Technical Writer
Technical Writer

These are continental based appointments for successful candidates whose principal responsibilities will be Technical Text Processing, Information Processing, File Maintenance and Improvements, Component cataloguing and preparation of Hand Books and associated documents. The Senior Technical Writer should be qualified to HNC level in Electronics or electrical engineering, have at least three years in Electrical component and circuits and the production of technical documents. Finally a knowledge of a European language would be advantageous. DLM13/4

Technical Writer

The purpose of this position is to assist the work of the Senior Technical Writer and candidates should have comparable experience to the above position. DLM13/5

DATAMATICS
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01-399 9183

Datamatics, Freeport, Surbiton, Surrey KT6 5BR

MANAGEMENT &
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CICS

SYSTEMS PROGRAMMERS
£8-11.5K

Our client based in Surrey is looking for two Junior Systems Programmers with 18 months' CICS and Assembler experience.

You will be part of a young, newly-formed team specialising in communications using the latest technology.

The work will involve the evaluation, development and installation of the latest communication facilities, including CICS networks and distributed data processing, 8100s.

Excellent continual training and career progression is part of our client's commitment to their technical support group.

Opportunities exist for 2 Trainees – a knowledge of OS and Assembler is preferred and CICS or 8100 experience would be an advantage.

For an immediate interview contact Faye Ogilvie or Karen Whelan on 01-637 9611.

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324 Regent Street, London W1. MANAGEMENT & EXECUTIVE SELECTION

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Alternatively write with full career details to Personnel Department, Systime Ltd., Millshaw Park, Leeds LS11 0LT.

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- 1) Programmers: X5 M68000 PASCAL/C/ADA (will consider similar machine/language).
- 2) Software Engineer: with RMS and BIOS Realtime operating SYSTEMS experience and MOTOROLA ASSEMBLER.
*Any other very good operating systems experience considered.
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All contracts: West of London
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IBM OS/MVS PL/1 (JSP) ANALYST/PROGRAMMERS
IBM 4300 COBOL DL/1 +/- CICS PROGRAMMERS
IBM OL/1 DATABASE DESIGNER
IBM CICS CONSULTANTS
Any IBM COBOL CICS ANALYST/PROGRAMMERS
IBM CICS COBOL ANALYST/PROGRAMMERS
IBM ASSEMBLER CICS COBOL (DATA FILE DICTIONARY EXP.) PROGRAMMERS
IBM CICS DL/1 CICS PROGRAMMERS
IBM 4TH GENERATION LANGUAGES (MIN. 2 LANGUAGES, E.G. FOCUS/RAMIS) CONSULTANT
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(FOR RPB/COBOL CONVERSION)
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AGS Computers Inc. is a well-established American consulting firm in the field of Software Services. A team of technical directors from our U.S. offices will be travelling throughout England to meet you and discuss opportunities to work in our various locations. These include New York, New Jersey, Connecticut, Massachusetts, Chicago and Denver.

There are many exciting possibilities available in both telecommunications projects at the prestigious Bell Labs and commercial applications at work in the finance, manufacturing and insurance industries. Telephone communications opportunities involve work with diagnostic systems, digital voice, message switching, networking, and CAD. Large scale commercial work includes database, CPU-CPU communications and support.

If you have at least two years' experience in either Unix and C or PL/1 IMS or Assembler/IMS, come talk to us. We'll tell you more details about the challenge and excitement of living and working in the U.S.A. We will also be happy to discuss opportunities for post-graduate students and professors. Call our London office today to arrange an appointment at one of these locations. Early morning or evening times can be arranged to accommodate your work schedule.

BRISTOL	12-13 April	Unicorn Hotel
MANCHESTER	14-16 April	Portland Hotel
GLASGOW	16-20 April	Albany Hotel
NEWCASTLE	21-23 April	Crest Hotel

For those in the South, we will be in our London office on Monday, April 11th, and will return on April 24th.

Call or write to: Donne Fox, AGS Computers Inc., Suite 404, Asphalte House, Pelece Street, London SW1. Telephone: 01-828 4377.

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IBM 8100 DPPX COBOL 6 months+
ANALYSTS - five yrs' + exp. IBM background.
Ideally worked in a structured environment

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SERVICES LTD

PROGRAMMER

NORTH
LONDON

DEC PDP
RSX 11M

c £10,000

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Applicants will ideally have a sound DP background to include at least two years' MACRO 11 applications programming gained in an RSX11 environment. Any exposure to Data Communications or Micros would be an added advantage. The successful candidate will be working closely with user departments and should therefore be able to communicate at all levels.

If you are stifled within your present position and would enjoy effective decision making this post will provide a real challenge. For further information on this ground floor opportunity within a small friendly team call CARL SMITH at APEX.

Apex Computer Recruitment Ltd.

404 4821

Apex

London Office:
59 Groy's Inn Road,
London WC1X 8TL
Tel: 01-404 4821

Brussels Office:
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your appointments register

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To sell computer related equipment/
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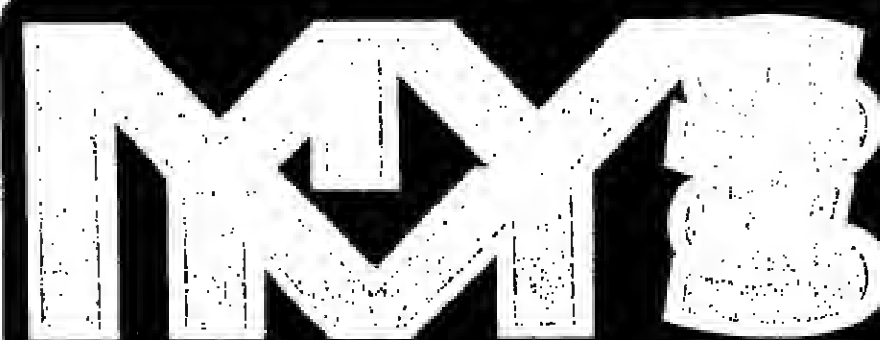
telephone 01 549 9236

Sloangate LIMITED
214 KINGS ROAD
KINGSTON-UPON-THAMES
SURREY KT2 6HX

The Appointments Register

MANAGEMENT & EXECUTIVE SELECTION

telephone
01-637 9611



SPECIALISTS to £17K

These are two appointments in our client's technical support group. The positions are based in the southern home counties and require the flexibility to travel.

MVS

You will be a senior member of a small team responsible for the introduction of an MVS/XT environment and support of MVS/SP. This will involve you in direct liaison with IBM and senior management.

IMS

Working within a small group providing a consultancy service on the implementation of data base systems, you will be the expert on IMS internals.

A sound knowledge of IMS/DB/DC is required, however IMS/DB will be considered.

Both positions offer competitive salaries and excellent benefits, including car allowance.

For an immediate interview contact Faye Ogilvie or Karen Whelan on 01-637 9611.

Suite 201/6 Albany House
524 Regent Street, London W1

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For further details, in the first instance phone Clive Owens TODAY on Reading (0734) 583696. Alternatively you can write to him at 118/128 London Street, Reading, Berks RG1 4SU. (Interviews will be conducted in Leeds).



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ICL/VMEB or K to £11K
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IBM/UNIVAC/COBOL to £12K
On-line/Databases Surrey

NCR 8200 to £14K
Financial SW LONDON

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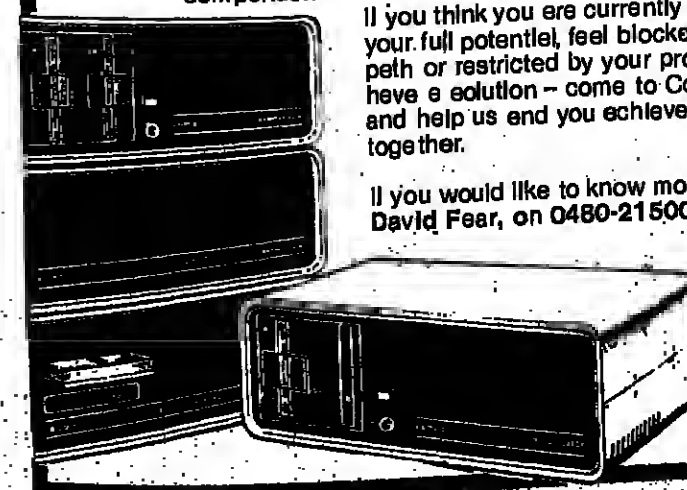
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